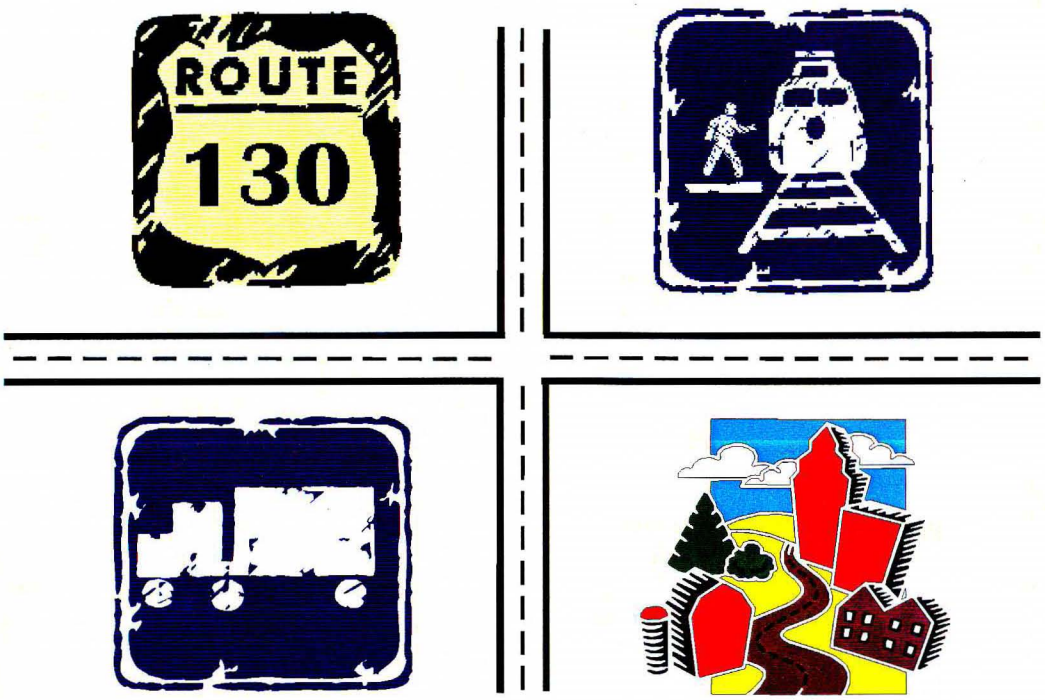
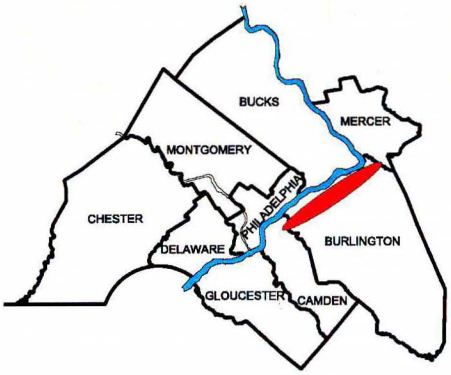


US 130 Corridor Study



YEAR 2020 PLANNING CORRIDORS
REPORT 1

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

US 130 CORRIDOR STUDY

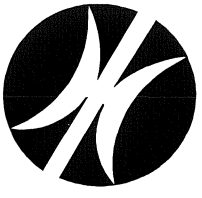
TRANSPORTATION AND CIRCULATION

Delaware Valley Regional Planning Commission

August, 1997

The preparation of this report was funded through federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA), Federal Transit Adminstration (FTA) and the New Jersey Department of Transportation (NJDOT). The authors, however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency which provides continuing, comprehensive and coordinated planning for the orderly growth and development of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties as well as the City of Philadelphia in Pennsylvania and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The Commission is an advisory agency which divides its planning and service functions among the Office of the Executive Director, the Office of Public Affairs, and three line Divisions: Transportation Planning, Regional Planning and Administration. DVRPC's mission for the 1990s is to emphasize technical assistance and services and to conduct high priority studies for member state and local governments, while determining and meeting the needs of the private sector.



The DVRPC logo is adapted from the official seal of the Commission and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River flowing through it. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey. The logo combines these elements to depict the areas served by DVRPC.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

Publication Abstract

TITLE	Date Published: August 1997
US 130 Corridor Study	
	Publication No. 97010

Geographic Area Covered:
The Corridor study area includes: Bordentown, Mansfield, Florence, Burlington, Willingboro, Delanco, Edgewater Park, Delran, Riverside, and Cinnaminson Townships; also Fieldsboro, Riverton, and Palmyra Boroughs; and the Cities of Bordentown, Burlington and Beverly, all within Burlington County.

Key Words:
transportation problem locations, improvement scenarios, project priorities, project benefits, economic development, investment strategies, implementation plan, estimated project costs

ABSTRACT

This document presents a transportation improvement plan for the US 130 Corridor in Burlington County. The plan documents the transportation needs of 44 project locations within the corridor and identifies 30 high priority locations. Potential improvement scenarios at these high priority locations represent a cost on the order of magnitude of approximately $300 million in capital investment on the highway network and an additional $450 million estimated for transit improvements. The estimated cost of the transit improvements represents the Camden to Trenton portion of the Southern New Jersey Light Rail Transit System. A write-up of the existing conditions, identified problems and long range and short range potential improvement scenarios for each location is presented. The Burlington County Freeholders have initiated a wide-ranging study of the US 130 Corridor in an effort to identify actions and or strategies which are aimed at revitalizing the study area by promoting economic development and improving the quality of life. The Delaware Valley Regional Planning Commission (DVRPC) was requested to assist in this corridor planning effort by conducting a study which addressed issues affecting transportation and circulation. This effort has resulted in a document that takes a comprehensive look at the transportation needs in the corridor and identifies which project locations are in need of immediate attention.

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EXECUTIVE SUMMARY

This document presents a transportation improvement plan for the US 130 Corridor (Corridor) in Burlington County. This plan takes a comprehensive look at the transportation needs of the Corridor and identifies which project locations are in need of immediate attention and who is responsible to get these projects moving to the next step. Those locations which are considered high priority are presented in Table 1 and represent a cost on the order of magnitude of approximately $300 million in capital investment on the highway network and an additional $450 million estimated for transit improvements. The estimated cost of the transit improvements represents the Camden to Trenton portion of the Southern New Jersey Light Rail Transit System including those sections which fall outside the study corridor.

Long range and short range improvement concepts are presented for 44 locations within the corridor. A description of the existing conditions, identified problems and potential improvement scenarios for each location is presented along with schematic figures. Each improvement scenario has been discussed with the study stakeholders in relation to its ability to solve existing or potential problems or deficiencies and are considered worthy of future action. Transportation improvements at these locations will have important implications for the economic vitality of the local areas as well as the quality of life and mobility of the corridor as a whole.

In addition to the 44 transportation problem locations identified through this process, this document also lists those projects in the corridor which are identified as part of DVRPC's Long Range Plan (LRP) or are programmed for implementation on DVRPC's FY 1998 - 2002 Transportation Improvement Program (TIP). By listing these projects, this improvement plan becomes as comprehensive as possible in identifying the transportation needs of the corridor.

The Burlington County Freeholders have initiated a wide-ranging study of the The Corridor in an effort to identify actions and or strategies which are aimed at revitalizing the study area by promoting economic development and improving the quality of life. The Delaware Valley Regional Planning Commission (DVRPC) was requested to assist in this corridor planning effort by conducting a corridor study which addressed issues affecting transportation and circulation. A steering committee, composed of representatives of the 16 municipalities located in the corridor, played an active role throughout the study process and were especially vital to DVRPC's efforts in preparing the transportation element of this corridor study. The participants from the series of municipal meetings are listed in Appendix A.

TABLE 1

Corridor Project Locations

Corridor-Wide	• Southern New Jersey Light Rail Transit, (TIP # N035)* • Traffic Signal Contract 16: NJ 30, NJ 38, NJ 70, NJ 73, (TIP # 0014)*
Beverly City	• Warren St and Cooper St and Bridge St • Southern New Jersey Light Rail Transit Station (TIP # N035)*
Bordentown City	• Southern New Jersey Light Rail Transit Station (TIP # N035)*
Bordentown Township	• US 130 and Highbridge Road • US 130 and Farnsworth Ave • US 130: from Burlington Street to Hedding Kinkora Road • US 206: Old York Road/Rising Sun Road, I-295 to NJ 68 (TIP # 1231)* • Southern New Jersey Light Rail Transit, (TIP # N035)*
Burlington City	• US 130 and Jacksonville Road/Federal Street* • US 130 and Columbus Road and Jones Road • Southern New Jersey Light Rail Transit Stations (TIP # N035)* • Burlington City Transportation Center (DVRPC Long Range Plan)*
Burlington Township	• Jacksonville Road and Old York Road* • Mt. Holly Avenue, Rancocas Road, Fountain Avenue and 13th Street* • Salem Road: from Mill Street to US 130* • Campus Drive: From US 130 to Sunset Road * • Rancocas Road and Elbow Lane* • Sunset Road and Amherst Drive • Salem Road and Willow Rd/Adams St • Neck Road and River Road • Southern New Jersey Light Rail Transit Station (TIP # N035)*
Cinnaminson Township	• US 130: from Andover Road to Taylor's Lane* • US 130 and Moorestown Riverton Road* • US 130 and Cinnaminson Avenue Complex* • Fork Landing Road over the Pennsauken Creek* • Traffic Signal Contract 16: NJ 30, NJ 38, NJ 70 and NJ 73, (TIP # 0014A)* • Southern New Jersey Light Rail Transit Station (TIP # N035)*
Delanco Township	• Creek Road and DMV Inspection Driveway* • Creek Rd/Burlington Ave Connector • Burlington Ave and Willow St • Southern New Jersey Light Rail Transit Station (TIP # N035)*

Delran Township	• US 130: from Creek Road to Tenby Chase Drive* • US 130 and Fairview Street* • US 130 and Chester Avenue/Haines Mill Road* • Creek Rd: from CR 613 to Moorestown Centerton Road (TIP # 1296)* • Southern New Jersey Light Rail Transit (TIP # N035)*
Edgewater Park	• US 130: from Creek Road to Van Sciver Parkway* • US 130 and Creek Road/Bridgeboro Road* • Warren Street Conrail Underpass • US 130 and Levitt Parkway/Woodlane Road • US 130 and Cooper Street / Charleston Road • Cooper Street: US 130 to Green Street • Delanco Road and Bridgeboro Road • Delanco Road and Perkins Lane • US 130 and Pennypacker Dr/Delanco Rd • Southern New Jersey Light Rail Transit (TIP # N035)*
Florence Township	• US 130 and Hornberger Avenue* • US 130 and Florence Columbus Road* • Florence Columbus Rd: from US 130 to I-295* • US 130 and Florence Bustleton Road/Cedar Lane* • US 130 and Florence Industrial Area • Southern New Jersey Light Rail Transit Station (TIP # N035)*
Mansfield Township	• US 130: from Burlington Street to Hedding Kinkora Road • Southern New Jersey Light Rail Transit (TIP # N035)*
Palmyra Borough	• NJ 73 and Broad Street* • Broad St: from Market St to Martha's Rd • Traffic Signal Contract 16: NJ 30, NJ 38, NJ 70 and NJ 73, (TIP # 0014A)* • Southern New Jersey Light Rail Transit Station (TIP # N035)*
Riverside Township	• Lafayette Street and Pavilion Avenue and Franklin Street* • Lafayette St / Fairview St and New Jersey Ave / Fairview St • St. Mihiel Dr / Chester Ave and New Jersey Ave / Chester Ave • Southern New Jersey Light Rail Transit Station (TIP # N035)*
Riverton Borough	• Broad St: from Market St to Martha's Rd • Southern New Jersey Light Rail Transit Station (TIP # N035)*
Willingboro Township	• US 130: from Creek Road to Van Sciver Parkway* • US 130 and Creek Road/Bridgeboro Road* • US 130 and Levitt Parkway/Woodlane Road • Levitt Pky at Sunset Rd, Charleston Rd and Salem Rd • Burlington County Computerized Signal Control, Phase III, (TIP # 1322)*

* Denotes High Priority Project Location

INTRODUCTION

The Burlington County Freeholders have initiated a wide-ranging study of the US 130 Corridor in an effort to identify actions and or strategies which are aimed at revitalizing the study area by promoting economic development and improving the quality of life. The Corridor runs in a generally north-south direction through the northwestern area of Burlington County (Figure 1). The Freeholder's study is being led by the County's Office of Land Use Planning and a steering committee composed of representatives of the 12 municipalities being addressed. The Steering Committee identified six areas of concern which specifically affect the corridor's quality of life. They are: 1) economic development, 2) transportation and circulation, 3) housing, 4) environment/open space/recreation, 5) community services and 6) utilities and infrastructure. Each of these areas will be analyzed and specific strategies will be identified which seek to achieve a set of common goals for the corridor.

The Delaware Valley Regional Planning Commission was requested to become a partner in this corridor planning effort by conducting a specific corridor study which addressed issues affecting area of concern # 2 - transportation and circulation. The study area for transportation and circulation was expanded to include 16 municipalities located in the corridor bordered by the Delaware River, Camden County, Mercer County and centered around US 130. This study area varies slightly from the overall county-initiated study area because the county's focus is on revitalization strategies for the older communities. The expanded area of the corridor is composed primarily of areas which are currently experiencing development pressures. Strategies designed to deal with these pressures are different than those designed to address revitalization issues. Specifically the municipalities included in the transportation and circulation study corridor are: Borough of Palmyra, Cinnaminson Township, Borough of Riverton, Delran Township, Riverside Township, Delanco Township, Willingboro Township, Edgewater Park Township, Beverly City, Burlington Township, Burlington City, Florence Township, Mansfield Township, Borough of Fieldsboro, Bordentown City and Bordentown Township (Figure 2).

The steering committee has played an active role throughout the whole study process and were especially vital to DVRPC's efforts in preparing the transportation element of this corridor study. From the beginning of this effort, steering committee members were involved in the original field views to review potential locations for inclusion in the study. Subsequent meetings were held with each municipality on an individual basis to discuss the existing problems, potential issues related to new development and the potential improvement scenarios to address them. Information provided

by the steering committee and other municipal representatives was invaluable to accurately assess the issues and to develop effective improvement scenarios. The steering committee members have a vested interest in improving the transportation and circulation, economic activity and quality of life not only in their own municipality but in the The Corridor as a whole. The New Jersey Department of Transportation (NJ DOT) also played an important role in this effort; participating in field views and meetings with the municipalities, offering insight on NJ DOT projects and policies as well as providing valuable comments and suggestions throughout the process.

Implementation of transportation and circulation improvements in a corridor can produce significant economic effects in the areas encompassed by the corridor. These effects include: impacts on businesses, impacts on property values, impacts on new development, impacts on employment - including those caused by construction, impacts on municipal tax revenues and impacts on highway users.

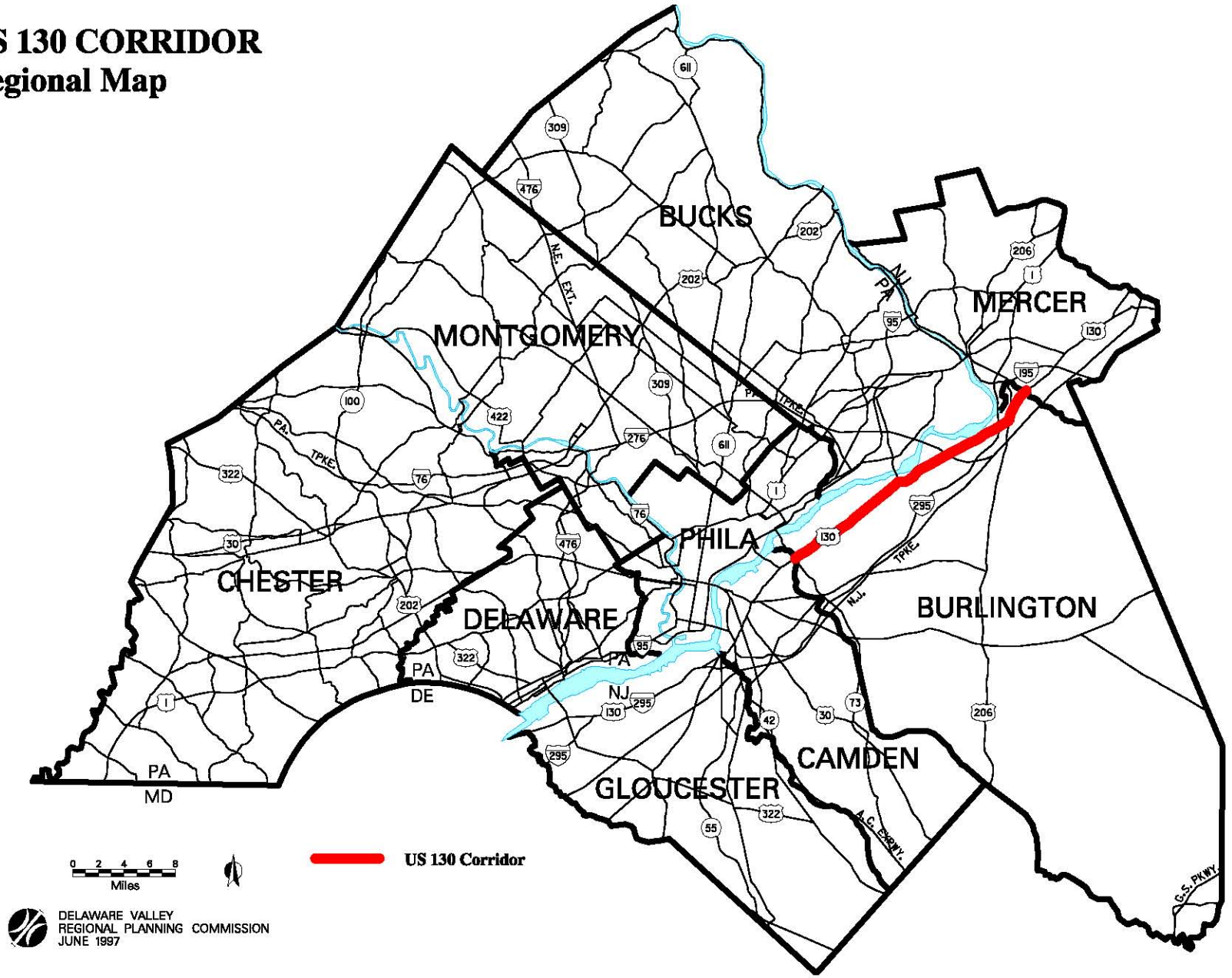
Economic impacts pertaining to transportation improvements are generally captured in the public or private sector as net losses or gains. From an economic standpoint, the impacts from a highway improvement can be classified in terms of direct, indirect or induced impacts. Direct impacts are those which produce immediate measurable changes such as increases in the number of on-site jobs available. Indirect impacts are those that result in some measurable net change in economic activity over time in a given community, which can be reasonably attributed to the development of the improvement such as increases in the number of jobs available at local material suppliers off-site. Induced impacts occur as a result of direct and indirect impacts of new employment and income resulting from successive rounds of spending. Economic impacts also occur on a secondary level for example, in property value changes. Transportation improvement projects generally increase the accessibility of affected parcels and areas. The strategic location of the improved facility within the region's transportation system and the relative increase in highway capacity determine how extensive the impact may be. New businesses or residential development may be attracted to the more accessible land or existing land uses may grow in intensity or extent.

Target Areas

Several sub-areas have been identified within the corridor which exhibit similar opportunities and constraints. The county has developed a specific listing of challenges for each sub-area in which strategies for improvements will be targeted. Identifying these areas allows governments to target investments to specific areas in order to maximize results. Government officials should also attempt to steer investments from the private sector into these target areas. Channeling investments into

FIGURE 1

US 130 CORRIDOR
Regional Map



US 130 CORRIDOR
Study Area Map
Figure 2

WHITEMARSH
UPPER DUBLIN
WARMINSTER
NORTHAMPTON
NEWTOWN
UPPER MAKEFIELD
HOPEWELL
SPRINGFIELD
UPPER MORELAND
ABINGTON
UPPER SOUTHAMPTON
LOWER MERION
CHELTENHAM
LOWER MORELAND
LOWER SOUTHAMPTON
MIDDLETOWN
LOWER MAKEFIELD
EWING
LAWRENCE
Princeton
TRENTON
WEST WINDSOR
PHILADELPHIA
BENSALEM
BRISTOL
FALLS
HAMILTON
PENNSYLVANIA TURNPIKE
PALMYRA
RIVERTON
DELANCO
BEVERLY
RIVERSIDE
EDGEWATER PARK
BURLINGTON
FIELDSBORO
BORDENTOWN
CINNAMINSON
DELRAN
WILLINGBORO
BURLINGTON
FLORENCE
BORDENTOWN
WASHINGTON
EAST WINDSOR
CAMDEN
PENNSAUKEN
Merchantville
Woodlynne
Collingswood
Haddon
Oaklyn
Audubon Park
Audubon
HADDON
Haddonfield
Haddon Heights
Barrington
Tavistock
Lawnside
Magnolia
Somerdale
Hi-Nella
Stratford
Laurel Springs
Lindenwold
Gibbsboro
Clementon
Pine Hill
Pine Valley
Berlin
BERLIN
VOORHEES
EVESHAM
GLOUCESTER CITY
Brooklawn
Westville
Mount Ephraim
Bellmawr
Runnemede
DEPTFORD
WOODBURY
GLOUCESTER
WASHINGTON
MAPLE SHADE
MOORESTOWN
MOUNT LAUREL
CHERRY HILL
WESTAMPTON
HAINESPORT
LUMBERTON
MOUNT HOLLY
EASTAMPTON
MEDFORD
SOUTHAMPTON
Pemberton
PEMBERTON
SPRINGFIELD
MANSFIELD
CHESTERFIELD
NORTH HANOVER
NEW HANOVER
Wrightstown
NEW JERSEY TURNPIKE

US 130

Detail Maps A,B,C

Municipality within Corridor Study Area

0 1 2 3
Miles

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JUNE 1997

target areas encourages the formation of a critical mass by focusing different types of interventions in a single place. This strategy also avoids spreading a little bit around to a lot of places.

Target Areas are physical geographical locations delineated by identifying a specific arrangement of land uses and development patterns which share common functional relationships found within the delineated area and have common constraints and opportunities defined as challenges for revitalization. Target Areas are linear, i.e., a strip of land development following a roadway or stream, or nodal, i.e., land development concentrated and centered around a core of land uses. The boundaries delineated for Target Areas are imprecise and dictated by the extent to which land uses and development patterns cover an area and the configuration of natural and man-made features which create significant changes in or transitions between common land use functions. Target Areas change as the arrangement of land uses and development patterns change, by expanding or contracting and as the common functional relationships of the area change.

As dominant features in the landscape, Target Areas significantly influence economic, social, cultural and visual qualities of surrounding areas. Target areas in the corridor are categorized as having local or corridor-wide significance. Locally significant Target Areas affect the immediate surrounding area within a community. In addition to affecting the immediate surrounding area, corridor-wide significant Target Areas affect the qualities of adjoining communities.

The identification of Target Areas are important for developing strategies for revitalizing the corridor. First, by identifying the challenges unique unto a Target Area, specific revitalization strategies are formulated. Second, because of the influence Target Areas have in the corridor, positive changes achieved in a Target Area strongly impact surrounding areas by encouraging more positive change. The converse is true if positive change is not achieved; the Target Area and surrounding areas continue to decline. The county-identified Target Areas (A and B) are presented below along with the challenges faced by each area in terms of their transportation issues. A Target Area outside the county-defined areas is also identified.

A. *Corridor Wide Significance*

1. Roebling Village and Steel Mill Site - Florence Township
   - improvement of access into Roebling from US 130 and by public transportation

2. Food Distribution Center and US 130 Area - Florence and Burlington Townships
   - provision of an adequate transportation network designed to accommodate an increase of commuters and commercial traffic, i.e., trucking, into the area

3. US 130 Highway Commercial Area and RT 413 link to the Burlington Bristol Bridge - Burlington City and Burlington Township
   - reduction in the number of curb cuts along US 130
   - improvement of the circulation patterns and functionality of the road system along US 130 and RT 413

4. Burlington Island - Burlington City
   - provision of access from US 130 to the Island

5. Waterfront and Downtown Business District - Burlington City
   - enhanced alternate forms of transportation into the city

6. CR 541 and I-295 Interchange Area - Burlington Township
   - provision of an adequate transportation network designed to accommodate an increase of shoppers, commuters and commercial traffic, i.e., trucking, into the area

7. US 130 Highway Frontage - Edgewater Park, Delanco and Willingboro Townships
   - reduction in the number of curb cuts along US 130
   - improvement of the circulation patterns and functionality of US 130 and its crossroads

8. Waterfront and Downtown Business District - Riverside Township
   - improvement of the circulation patterns and parking in the downtown area

9. Marina District - Delran Township
   - improvement of the circulation patterns and parking in the marina district

10. US 130 Frontage - Delran and Cinnaminson Townships
    - reduction in the number of curb cuts along US 130
    - improvement of the circulation patterns and functionality of US 130, its intersecting roads and its crossroads

11. NJ 73 Frontage and link to Tacony-Palmyra Bridge - Palmyra Borough
    - improvement of the circulation patterns and functionality of NJ 73, its intersecting roads and access to the southern side of NJ 73

B. *Local Significance*

1. Cooper Street - Edgewater Park Township and Beverly City
   - reduction in the number of curb cuts along Cooper Street in Edgewater Park
   - improvement of the circulation patterns and parking supply along Cooper Street

2. Waterfront and Business District - Beverly City
   - improvement of the parking supply in the business district
   - improvement of access to the waterfront and business district, i.e., vehicular and public transit.

3. Burlington Avenue - Delanco Township
   - improvement of the circulation functionality of Burlington Avenue and the parking supply along Burlington Avenue

4. Broad Street - Palmyra and Riverton Boroughs
   - improvement of the circulation patterns and functionality of Broad Street, with a focus of making Broad Street more downtown friendly
   - improvement of the parking supply in the downtown business district
   - improvement of access to the downtown business districts, i.e., from US 73 and US 130 and by public transportation

C. *Outside County-Defined Target Areas*

1. Mansfield, Florence and Bordentown Townships
   - implement growth and access management strategies
   - improve access between US 130, I-295 and NJ Turnpike

Transportation Investment Strategy

The Transportation and Circulation component of the overall Corridor planning effort performs several functions. It undertakes the traditional examinations of an existing transportation/circulation system, in this case it is the Corridor's system, identifying safety and functional or operational problems and recommends potential solutions, as appropriate. Beyond the traditional transportation planning approach, the transportation and circulation component builds a bridge between recommended physical improvements and potential economic development, providing investment strategies to link transportation improvements with economic development opportunities in the Corridor. Not all recommended improvements are related to economic development; some are solely intended to improve the safety and functionality of aspects of the system.

As part of the overall Corridor planning effort, the transportation and circulation component promotes local and regional planning. More specifically, it does this by creating a joint municipal, county and state participatory process, identifying local and regional transportation and circulation needs and desires. formulating multi-jurisdictional goals and objectives and developing policies and strategies into one overall guiding plan. Each jurisdiction should embrace the plan and implement it through a continued process of cooperation.

Like the overall Corridor planning effort, the Transportation and circulation component does not employ a top-down planning approach where the county and state dictate to the municipalities. As part of the process, this component demonstrates to the municipalities how local decisions about transportation and circulation have regional impacts and how planning with a regional perspective will help to resolve local and regional issues. This component utilizes a cooperative planning process through which local, county and state objectives are integrated to develop mutually beneficial solutions. For example, local master plans and capital improvement plans should set forth policies and recommendations that are consistent with the *Burlington County Transportation and Circulation Master Plan* and the *New Jersey State Development and Redevelopment Plan (SDRP)*. Also, county and state actions should strive to achieve local objectives while addressing regional needs. This approach is taken from the Corridor consensus planning process which addresses the quality of life issues identified by the steering committee, of which transportation and circulation are considered as one.

To invest limited resources in the transportation infrastructure most effectively and efficiently, an investment strategy has been developed. This strategy is aimed at assisting the stakeholders in directing their resources to produce the greatest benefits for the corridor. The investment strategies address the following areas:

1. Safety/Functionality
   - A. provide safer travel conditions and improve the operations of the roadways by correcting deficiencies or substandard designs
2. Economic Development
   - A. help create new economic nodes of activity
   - B. help improve existing economic activity
   - C. Increase potential patronage of traditional downtown areas
   - D. provide adequate mass transit service to access jobs and purveyors of goods and services
   - E. Improve movement of freight via highway and rail
   - F. help strengthen corridor and regional tourist trade

BACKGROUND

Regional Setting

The Corridor runs in a generally north-south direction through the northwestern area of Burlington County. It covers approximately 22 miles from the Camden County line to the Mercer County Line. The corridor is situated in the Philadelphia metropolitan area and has easy access to New York and Trenton to the north and Philadelphia and Wilmington to the south.

The primary facility carrying traffic through this corridor is US 130. Other major north-south highways which serve portions of the corridor include: I-295, the New Jersey Turnpike including its Pennsylvania Extension and US 206. East-west highways serving the corridor include: NJ 73, CR 541 and Route 413. Freight rail service is provided through the corridor by Conrail along the Bordentown Secondary Line which runs through the heart of the corridor from Camden to Trenton. New Jersey Transit provides bus service through and within the corridor. The potential to initiate light rail passenger service in the corridor is currently being evaluated by New Jersey Transit. The corridor has deep-water port capabilities - the Delaware River channel is 40 feet deep and has ocean going vessel traffic as far north as the Burlington Bristol Bridge area. There are several marinas serving pleasure craft located along the Delaware River and Rancocas Creek.

US 130 provides a significant contribution in relation to moving people and goods through and within the region. In some cases, the highway functions as a local road, serving short shopping or work trips, accessing the commercial land uses located along the highway or in its immediate vicinity. In other cases, the three travel lanes by direction provide the needed capacity to accommodate those trips leaving the corridor destined to other parts of the region. This is affirmed by the congregation of trucking firms located throughout the corridor especially in the Creek Road area of Delanco Township and the planned Food Distribution Center in Florence and Burlington Townships. The adequacy of connections from US 130 to the interstate system varies throughout the corridor. The northern end provides opportunities to access I-295, I-195 and the New Jersey Turnpike. In Florence Township, the planned interchange between US 130 and the New Jersey Turnpike Extension will greatly enhance the mobility of this area. A direct connection between US 130 and I-295 is also available via Florence Columbus Road. The connections to I-295 become more tenuous in the southern portion of the corridor. However, connections to I-95 in Pennsylvania can be made via NJ 73 and the Tacony Palmyra Bridge or NJ 90 and the Betsy Ross Bridge.

The presence of the jersey barrier median in the southern section of the corridor coupled with the

limited opportunities for direct crossings of the highway, creates the feel of a community divider. Municipalities such as Cinnaminson and Delran must consider the effects of this physical barrier and lack of crossing opportunities when providing services to their residents. For municipalities such as Edgewater Park and Willingboro, the highway forms a literal as well as figurative border. Interactions by residents of these municipalities are constrained by the physical presence of the highway.

Demographics

Although the population of the 16 identified corridor municipalities is projected to grow between 1990 and the year 2020 (7.6%), the growth is significantly slower than the projection of the county's population growth (19.2%). According to the US Bureau of the Census, the 1990 population of the corridor municipalities was 145,566 which represented approximately 36.8% of the county total. These municipalities are projected to have a population of 156,622 by 2020, this represents approximately 33.2% of the county total. Seven of the corridor municipalities are expected to lose population between 1990 and 2020. The northern section of the corridor is expected to experience significant growth. Specifically, the population of the area comprised of Burlington Township (39%), Florence Township (43%), Mansfield Township (118%) and Bordentown Township (36%) is projected to grow by 48%.

In terms of density of population, the 1990 Census indicates that Riverside Township and Bordentown City are the most dense municipalities in the corridor with 7.6 and 7.0 persons per acre respectively. These locations are significantly higher than the county as a whole which had a population density of 0.8 persons per acre in 1990. In fact, all but one corridor municipality has a population density considerably higher than the county. The density of Mansfield Township is 0.3 persons per square mile. Mansfield, the largest municipality in the corridor, has significant potential for growth since 89% of its 14,763 acres remained undeveloped in 1990.

Between 1990 and 2020, employment growth in the corridor (26.9%) will be in step with the employment growth in the county (27.7%). The biggest gains in the corridor are expected in Burlington Township; an increase of 4,722 new jobs (46.5%). Bordentown Township is projected to add 1,884 new jobs (33.1%) and Florence Township is projected to add 1,530 jobs for an increase of 41.9%. There are no municipalities in the corridor or in the county for that matter which are expected to have a decrease in jobs during that time period.

Land Use

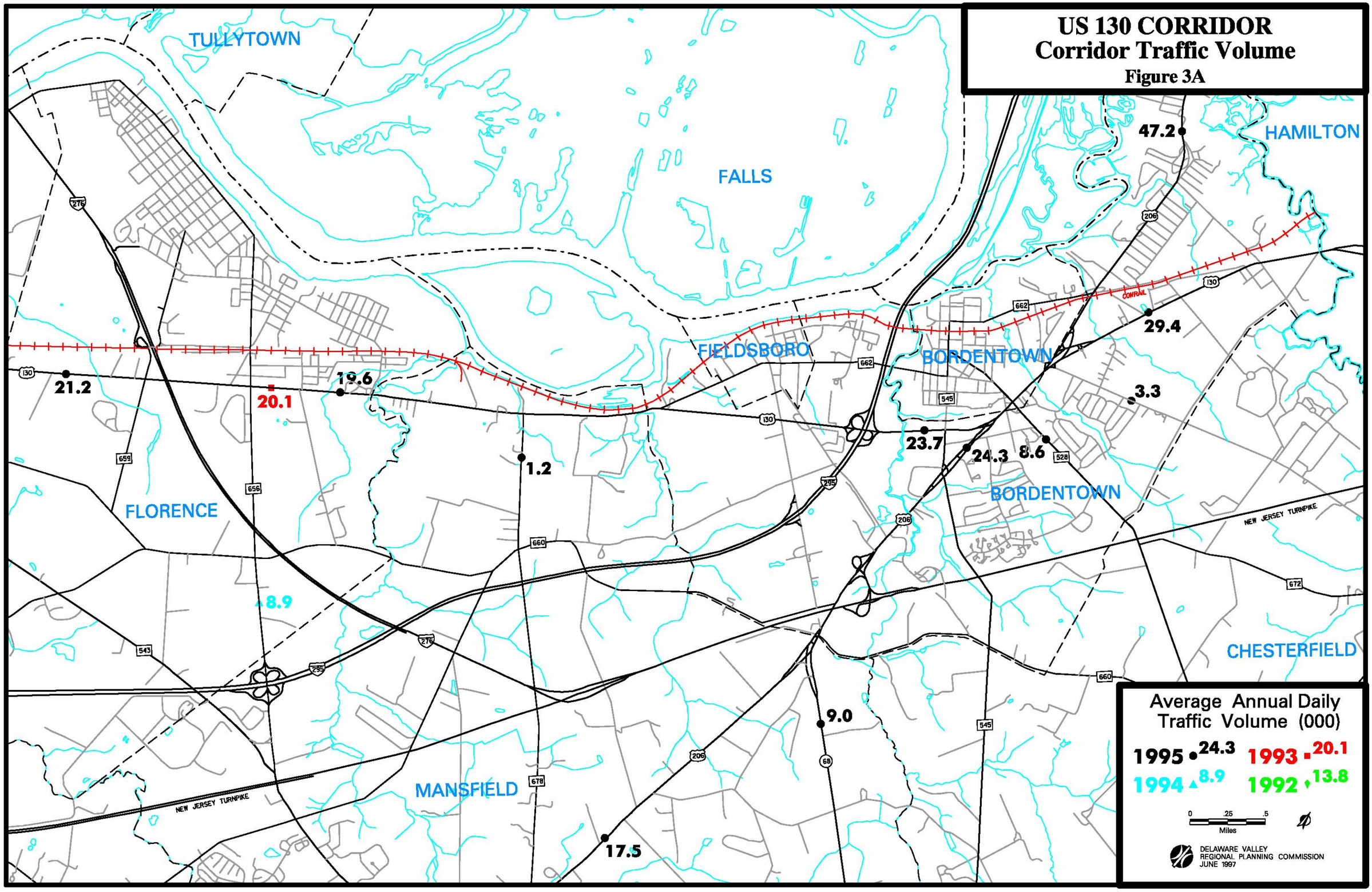
The land use types and densities vary throughout the corridor. The municipalities in the northern end of the corridor are generally less developed than those in the central and southern areas. Agricultural and wooded areas are plentiful in the north although residential development dominates the areas of Bordentown City and the Roebling area of Florence Township. Mansfield, Florence and Burlington Townships are beginning to feel the pressures residential development. Commercial and industrial development is emerging along Mount Holly Road (CR 541) in the vicinity of I-295. Older communities located along the river, including Burlington City, Beverly, Riverside, Riverton and Palmyra; are a mix of compact residential, small commercial downtown areas and active/inactive industrial sites. From Edgewater Park and Willingboro through Delran and Cinnaminson US 130 is typified by strip commercial development. The remainder of these four municipalities is generally suburban residential development.

Development and/or redevelopment opportunities are plentiful throughout the corridor. There is an important connection between the land use and transportation infrastructure in this corridor. The development and redevelopment activities taking place or proposed to take place within the corridor require improvements and additions to the highway network. The converse is also true; improvements and additions to the highway network as well as initiation of passenger rail service within the corridor will make the area more attractive to businesses and is expected to spur capital investment for new enterprises as well as existing ones. An example of this scenario is provided by the proposed Food Distribution Center in Florence and Burlington Townships. The scheduled construction of a new interchange between the New Jersey Turnpike and US 130 has made this area attractive for development. The Food Distribution Center will undoubtedly benefit from the new interchange but will also generate additional traffic into the area for which improvements to the local road network will be necessary.

Traffic Volumes

Along US 130, there is a significant variation in the amount of traffic using the highway. In the southern end of the corridor near Cinnaminson Road, the annual average daily traffic (AADT) volumes counted by DVRPC in 1995 were approximately 59,900 vehicles per day. Proceeding north through the corridor, the volumes start to decrease. A count of 48,200 vehicles per day was recorded just south of Creek Road in Delanco. Volumes continued to drop to an AADT of 36,900 in Burlington City. In the area of the proposed Food Distribution Center, the AADT was recorded at 21,200. Traffic on US 130 just north of I-295 in Bordentown Township has dropped significantly since the completion of I-295 (Trenton Complex) in Mercer County. The post-completion traffic was recorded at 23,700 vehicles per day. On the very northern end of the corridor, north of US 206, the AADT was recorded at 29,400. These volumes and others located in the corridor which were collected by DVRPC are presented on figures 3a, 3b and 3c.

US 130 CORRIDOR
Corridor Traffic Volume
Figure 3A



Average Annual Daily Traffic Volume (000)

1995 • 24.3 1993 ▪ 20.1

1994 ▲ 8.9 1992 ◆ 13.8

0 .25 .5 Miles

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US 130 CORRIDOR
Corridor Traffic Volume
Figure 3B

BENSALEM

BRISTOL

BRISTOL

DELANCO

BEVERLY

EDGEWATER PARK

BURLINGTON

BURLINGTON

WILLINGBORO

FLORENCE

SPRINGFIELD

CONRAIL

NEW JERSEY TURNPIKE

1.5 ▲

2.4

7.4

3.6

9.1

1.7

6.9

21.2

20.6

10.7

19.2

6.5

13.8 ▲

14.0 ▲

3.6

5.7

33.7

6.6

32.4

Average Annual Daily Traffic Volume (000)

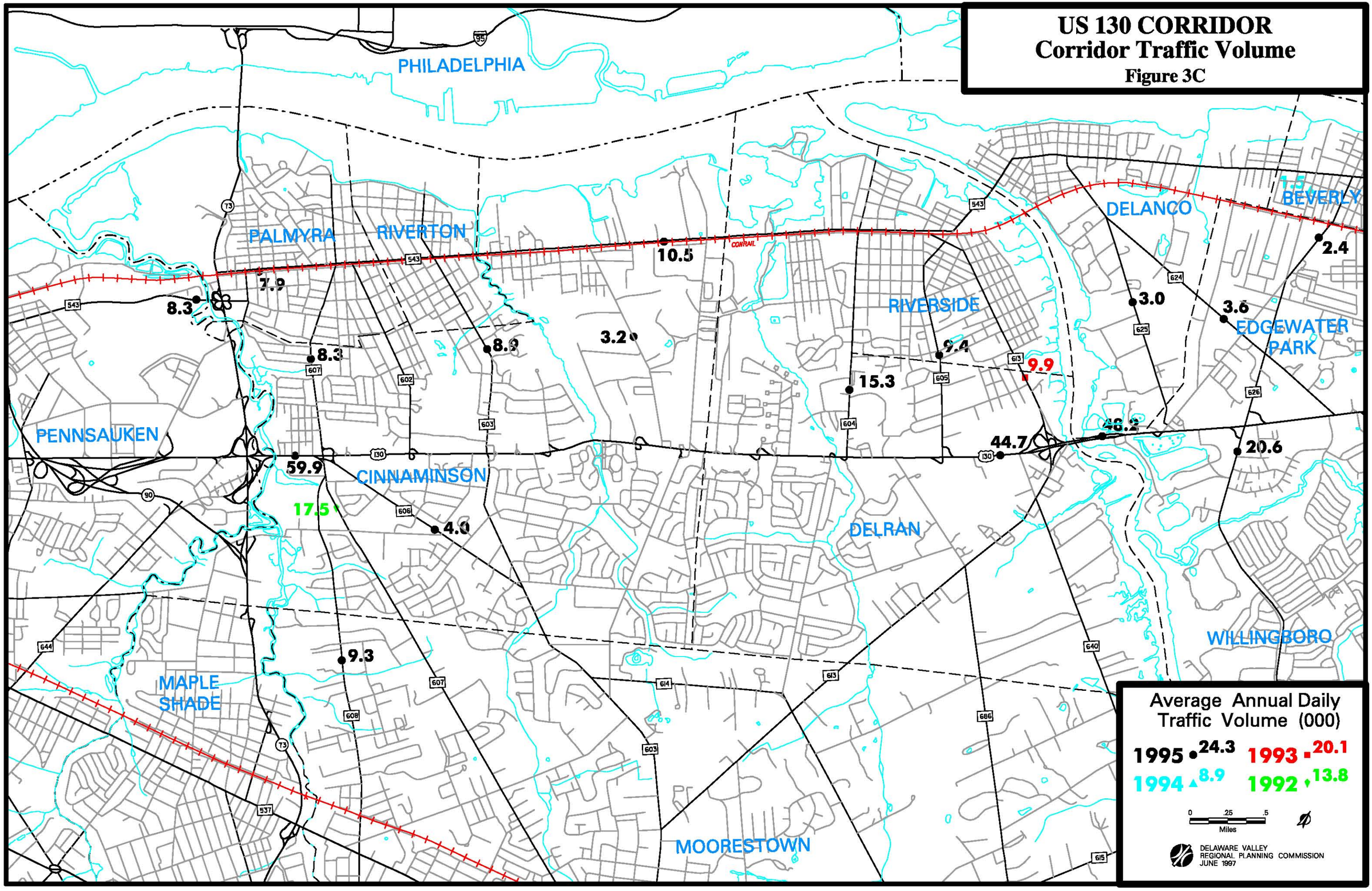
1995 • 24.3 1993 ■ 20.1

1994 ▲ 8.9 1992 ◆ 13.8

0 .25 .5 Miles

DELAWARE VALLEY REGIONAL PLANNING COMMISSION
JUNE 1997

US 130 CORRIDOR
Corridor Traffic Volume
Figure 3C



TRANSIT OPPORTUNITIES

Light Rail Transit

An unique opportunity is currently unfolding in the corridor. NJ Transit is currently evaluating the potential for initiating light rail transit (LRT) service along the Bordentown Secondary Line which runs through the heart of the corridor from Camden to Trenton. This passenger service, highlighted on Figure 4, is part of New Jersey Transit's proposed Southern New Jersey Light Rail Transit System (SNJLRTS). The 34-mile Camden to Trenton route is part of a proposed 53-mile system that runs from Trenton, through Burlington and Camden Counties, turning south in Camden and serving Gloucester County to Glassboro. New Jersey Transit is currently performing preliminary design on the Camden to Trenton corridor with service potentially being initiated by 2001. This northern section has been designated as the initial operating corridor.

In addition to linking communities in Mercer, Burlington, Camden and Gloucester Counties, the system is proposed to provide direct connections with the PATCO, NJ Transit, SEPTA and AMTRAK Systems. This new service would link residential areas to existing employment centers and has the potential to spur capital investment which would bring expanded job opportunities into the corridor.

Currently, this line provides freight service, run mostly at night, to industrial users along the corridor. For safety reasons, the passenger and freight systems are proposed to operate on a time separated schedule; meaning that the freight trains will operate at a different time than the light rail. The existing line is single track and the LRT system will continue to operate on this configuration. However, approximately 35% of the track will have sidings to allow trains traveling in opposite directions to pass one another. Sidings are generally expected to be located at station stops and in rural and industrial areas. The existing 52 public grade crossings between Camden and Trenton will for the most part remain open. However, a minimal number may be closed.

During the preliminary engineering, numerous locations will be evaluated for their potential to serve as stops along the line. The Camden to Trenton section is expected to have approximately 19 stops. After some preliminary evaluations and discussions between NJ Transit, the County and the local municipalities, 12 locations along the corridor have been selected as potential stops. These locations are displayed on Figure 4. Six locations are projected to be developed as park and ride sites. The remaining six will be more local in nature with limited parking and will encourage walk-up patrons. A description of the 12 potential locations is presented below:

Park and Ride Sites: some of these facilities may hold up to 500 vehicles and are typically located outside densely developed residential areas and/or are generally provided with good highway access.

- Route 73: This site is actually located in Pennsauken along River Road just south of NJ 73. This site provides good access to NJ 73, the Tacony Palmyra Bridge and River Road.
- Union Landing Road: This site is located in Cinnaminson Township in the vicinity of a proposed residential development with potential for 600 to 900 units. An improved connection between Union Landing Road and US 130 could open up access to the eastern portions of Cinnaminson and Delran Townships.
- Coopertown Road: This location has the potential to be developed as a park and ride site and is located adjacent to the residential area in Delanco Township. Residents of Edgewater Park and Beverly also have good access to this location.
- Burlington South: This site is located along Keim Bldv. in the vicinity of the Burlington Bristol Bridge and has the potential to be developed as a park and ride facility.
- Burlington North: Discussions about this site located at Dulty's Lane have included the possibility that this facility may hold up to 500 vehicles.
- Roebling: A relatively smaller facility is envisioned at this location on Hornberger Avenue.

Local Stops: these locations will be designed to encourage walk-up patrons and provide limited opportunity for vehicle parking. The design is expected to address community traffic and safety concerns and be configured to provide convenient connections to local bus service as well as to promote local business development. Because of the limited opportunity for vehicle parking the traffic impact to the local street network is expected to be minimized. These sites include:

- Palmyra: north of Cinnaminson Avenue
- Riverton: south of Main Street
- Riverside: south of Pavilion Avenue
- Beverly: north of Cooper Street
- Burlington Town Center: south of High Street
- Bordentown City: south of Farnsworth Avenue

Headways of 15 minutes are proposed during AM, mid-day and PM peak periods and 30 minutes during off-peak periods. Service is expected to operate from approximately 6 AM to 11 PM. Total travel time between Trenton and Camden is expected to take approximately one hour which is about twice as fast as the limited number of bus trips that currently provide this service.

US 130 CORRIDOR
Transit Opportunities
Figure 4

SPRINGFIELD
UPPER MORELAND
UPPER SOUTHAMPTON
NORTHAMPTON
ABINGTON
CHELTENHAM
LOWER MORELAND
LOWER SOUTHAMPTON
MIDDLETOWN
LOWER MAKEFIELD
EWING
LAWRENCE
TRENTON
PHILADELPHIA
BENSALEM
BRISTOL
FALLS
HAMILTON
PENNSYLVANIA TURNPIKE
PALMYRA
RIVERTON
DELANCO
BEVERLY
RIVERSIDE
EDGEWATER PARK
BURLINGTON
FIELDSBORO
BORDENTOWN
CAMDEN
CINNAMINSON
PENNSAUKEN
DELRAN
WILLINGBORO
BURLINGTON
FLORENCE
BORDENTOWN
Merchantville
Woodlynne
Collingswood
Oaklyn
Audubon Park
HADDON
Audubon
MAPLE SHADE
MOORESTOWN
CHESTERFIELD
NEW JERSEY TURNPIKE
MANSFIELD
Haddonfield
Haddon Heights
Barrington
Tavistock
Lawnside
Magnolia
Somerdale
Hi-Nella
Stratford
Laurel Springs
Lindenwold
Gibbsboro
MOUNT LAUREL
WESTAMPTON
HAINESPORT
MOUNT HOLLY
EASTAMPTON
CHERRY HILL
VOORHEES
EVESHAM
LUMBERTON
SPRINGFIELD
Wrightstown

Proposed Light Rail Transit
Potential Park and Ride Location
Potential Local Station
Bus Route
Municipality within Corridor Study Area

0 1 2 3
Miles

DELAWARE VALLEY
REGIONAL PLANNING COMMISSION
JUNE 1997

This new facility creates opportunities to develop connector and circulator bus routes to supplement the existing NJ Transit bus service in the corridor. Connector bus routes could be used to provide cross corridor service which would provide access between the LRT line and the residential areas across US 130 and the commercial uses along the highway. These connector type routes would increase the accessibility of the LRT service and enlarge its capture area. This could be accomplished by NJ Transit establishing new routes or rerouting existing routes. Circulator/shuttle bus routes could be designed to serve as an extension of the line, taking riders from the station to concentrations of employers in the vicinity of the station. Candidate locations for this type of service include the proposed Food Distribution Center or the industrial parks in Cinnaminson and Delran. Typically, these shuttle services are subcontracted and paid for by a consortium of employers specifically for their employees.

The expected benefits of the Southern New Jersey Light Rail Transit System include: improved mobility for residents of the corridor, reduction of traffic congestion on highways in the corridor and greater opportunity and accessability to area businesses. In addition, this service is expected to promote economic development within the corridor. The corridor will become more attractive to new housing developments whose residents will be offered a quick, safe and convenient access into employment centers in Trenton, Camden and Philadelphia. New and existing businesses in the corridor, such as the proposed Food Distribution Center, will find it easier to attract employees.

Bus Routes

There are currently three bus routes that run through the corridor; Route 409: Trenton-Willingboro-Philadelphia, Route 413: Philadelphia-Mt. Holly-Burlington and Route 419: Burlington-Philadelphia.

The Route 409 runs through the corridor primarily on US 130 with occasional variations into Willingboro, Burlington City and Roebling. This route offers half-hourly service from the NJ Transit park and ride lot at the Willingboro Plaza to Trenton and 15 minute headways to Philadelphia in the AM peak. Both, local and express service are available on this route. Travel time in the AM peak from Willingboro Plaza to Philadelphia (Broad and Cherry Sts.) is about 45 minutes via express and about an hour on the local bus. AM travel time from Willingboro Plaza to Trenton Rail Station is approximately one hour and ten minutes with local service and 50 minutes on the one express trip.

The Route 413 serves the section of the corridor between Burlington City and Mt. Holly primarily along CR 541. The route also connects Mt. Holly to Cherry Hill, Camden and Philadelphia. One hour headways and travel times of 40 minutes between Burlington City and Mt. Holly are typical of this route. There are several express busses between Burlington City and Mt. Holly during the day that

can make the trip in approximately 25 minutes.

The Route 419 serves the section of the corridor between Burlington City and Palmyra utilizing Warren Street, Burlington Street and Broad Street. The route continues south through Pennsauken and Camden into Philadelphia. Total AM peak travel time between Burlington City and Philadelphia (Broad and Cherry Sts.) is about an hour and 22 minutes on the local bus and about an hour and 13 minutes via the two express busses. This route virtually parallels the proposed LRT line from Burlington City south through the corridor. Bus service will be complimentary rather than competitive to the LRT line. Although the travel time is approximately twice as long, the bus will offer local service by providing stops all along the route. The LRT line will offer limited stops at designated stations. Although the bus may lose some ridership to the LRT system, the bus service still serves an important need and should be retained when the light rail system becomes operational.

TRANSPORTATION PROBLEM LOCATIONS AND IMPROVEMENT SCENARIOS

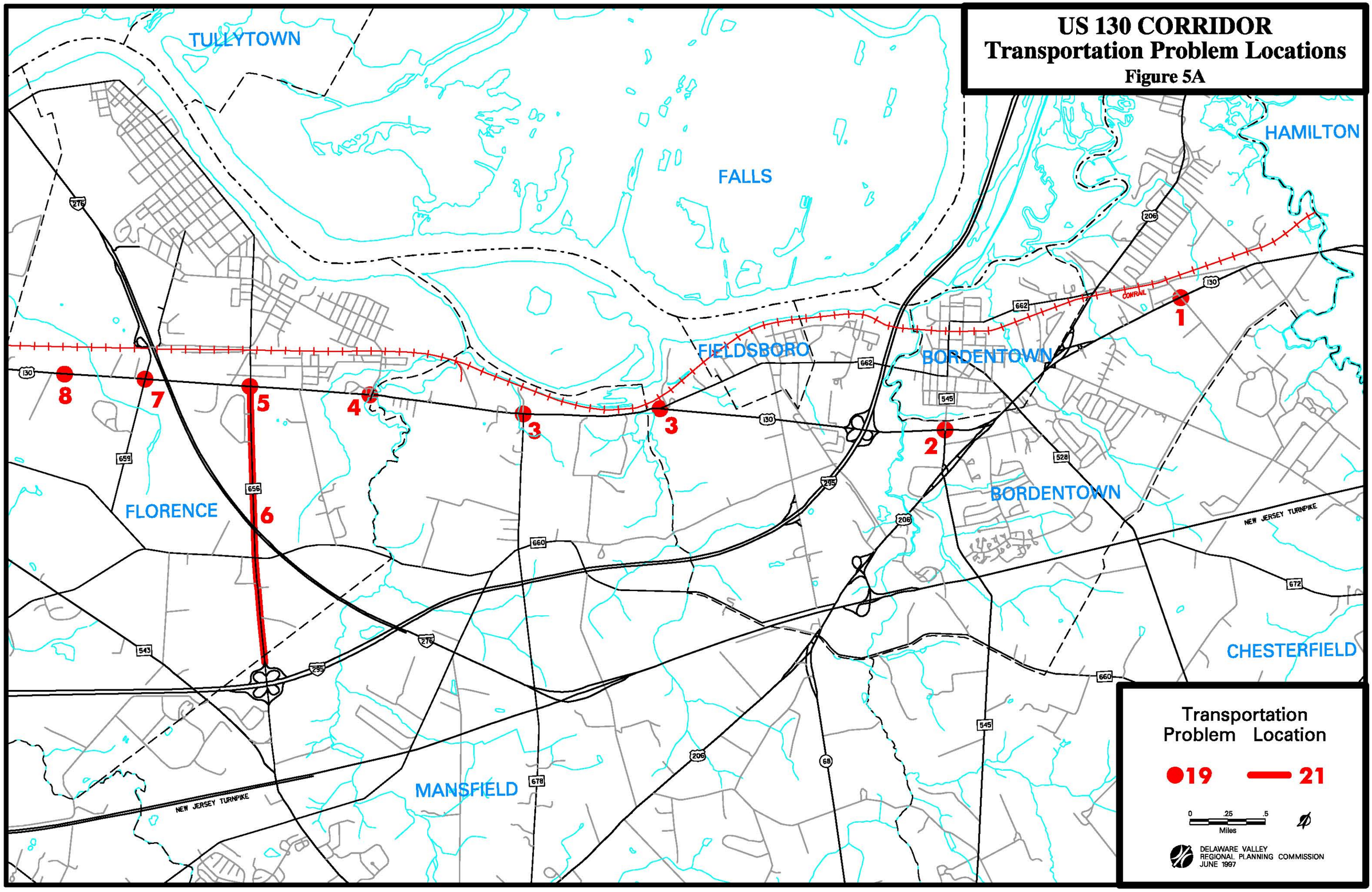
This section of the report presents those locations within the corridor which have been identified using technical analysis and suggestions from the local municipalities as currently experiencing transportation problems, as critical to the mobility of people or goods throughout the corridor or as projected to have significant impacts to the transportation infrastructure because of proposed changes in a nearby land use (economic development pressures). There are 44 locations which have been identified within the 16 municipalities which make up this corridor. These locations are shown graphically on figures 5a, 5b and 5c. A relatively detailed write-up of the existing conditions, identified problems and potential improvement scenarios for each location is presented along with schematic figures.

Because of the nature of this planning document, specific detailed improvement recommendations are not provided. However, short term and long term potential improvement scenarios which represent a range of alternatives are presented. These scenarios have been discussed with the study stakeholders in relation to their ability to solve existing or potential problems or deficiencies and are considered worthy of future action. Transportation improvements at these locations could have important implications for the economic vitality of the local areas as well as the mobility of the corridor as a whole.

At the onset of this effort, multi-agency field views were conducted to review potential locations for inclusion into the study. Participants included representatives from each of the local municipalities, staff from the Burlington County Office of Land Use Planning, Burlington County Engineer's Office, New Jersey Department of Transportation and the Delaware Valley Regional Planning Commission. During these preliminary field views, a base set of locations was identified for further review. DVRPC staff conducted subsequent follow-up field views to better define the existing conditions, observe the operating conditions, refine the problem identification and begin to formulate potential improvement scenarios. Each location was documented in terms of the above mentioned criteria and individual municipal meetings were held with the study participants to discuss the findings and the potential improvement scenarios. The information that follows for each location is a result of that process and recommends actions to be pursued based on cooperative discussions and input from each of the study participants.

The location descriptions are presented from a general north-south direction through the corridor and the numbering has no relation to project priority.

US 130 CORRIDOR
Transportation Problem Locations
Figure 5A



US 130 CORRIDOR
Transportation Problem Locations
Figure 5B

BENSALEM
BRISTOL
BRISTOL
DELANCO
BEVERLY
EDGEWATER PARK
BURLINGTON
BURLINGTON
WILLINGBORO
FLORENCE
SPRINGFIELD
CONRAIL
NEW JERSEY TURNPIKE

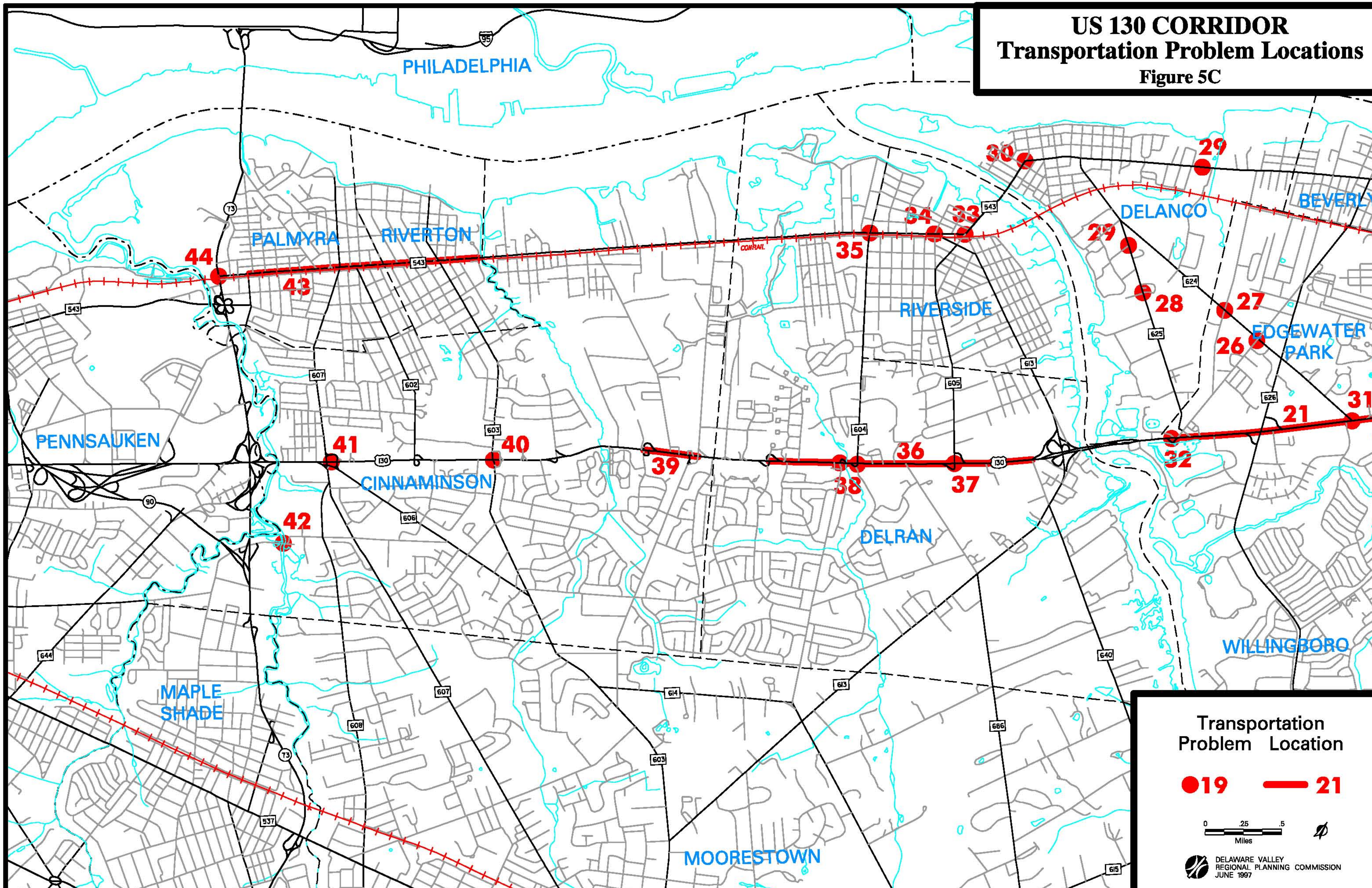
29 19 9 27 26 25 24 22 21 14 31 23 15 10 11 8 7 32 23 17 13 23 16 12 18

Transportation Problem Location

19 — 21

0 .25 .5 Miles

DELAWARE VALLEY REGIONAL PLANNING COMMISSION
JUNE 1997



US 130 CORRIDOR
Transportation Problem Locations
Figure 5C

FIGURE 6

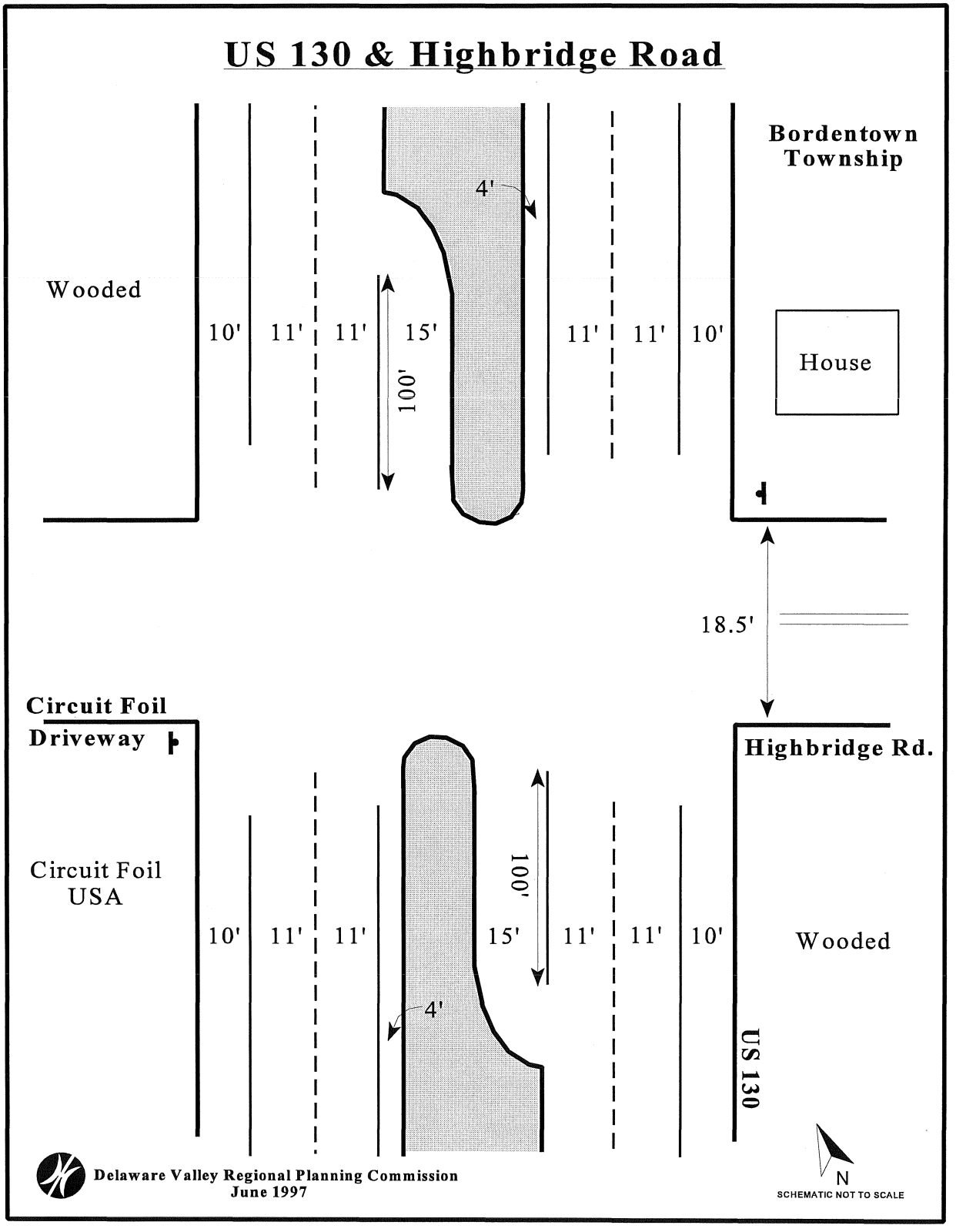
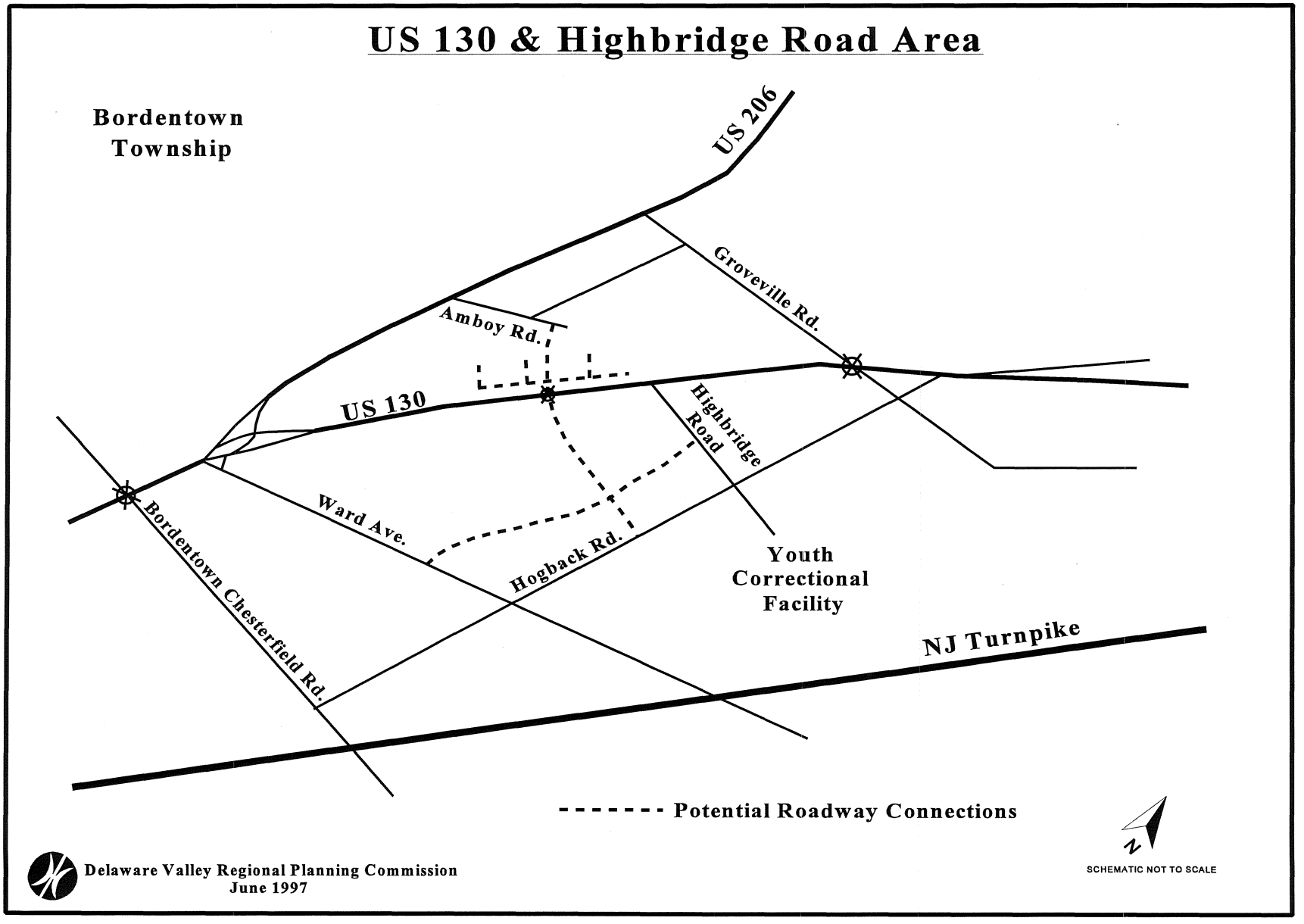

US 130 & Highbridge Road
Bordentown Township
Wooded
4'
10'
11'
11'
15'
100'
11'
11'
10'
House
18.5'
Circuit Foil Driveway
Highbridge Rd.
Circuit Foil USA
Wooded
US 130
N
SCHEMATIC NOT TO SCALE
Delaware Valley Regional Planning Commission
June 1997

FIGURE 7


US 130 & Highbridge Road Area
Bordentown Township
US 206
Groveville Rd.
Amboy Rd.
US 130
Highbridge Road
Ward Ave.
Hogback Rd.
Bordentown Chesterfield Rd.
Youth Correctional Facility
NJ Turnpike
Potential Roadway Connections
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

1. US 130 AND HIGHBRIDGE ROAD MILE POST: 57.3
Bordentown Township

Existing Conditions:

This intersection operates as a four leg intersection although the western leg is actually a low-volume driveway to a business (Circuit Foil USA). Operations at the intersection are controlled by stop signs on Highbridge Road and the business driveway. US 130 consists of two 11-foot travel lanes in each direction with a 4-foot inside shoulder and a 10-foot outside shoulder. The roadway is separated by a grass median. On US 130, the travel lanes are supplemented at the intersection by a center left turn lane in each direction. The southbound left turn lane which provides access to Highbridge Road is 15 feet wide and 100 feet long. Highbridge Road carries one lane by direction and is 18.5 feet wide. This road leads directly to the Garden State Reception and Youth Correctional Facility approximately one-half mile from US 130.

A traffic count conducted by DVRPC in 1995 indicated an AADT (average annual daily traffic) of approximately 29,400 vehicles on US 130 just south of Highbridge Road.

Identified Problems:

- This location is the primary access from US 130 to the correctional facility for employees and guests.
- Turning movements at the intersection increase during change of shift and during visitation at the correctional facility.
- This situation causes congestion and potential safety problems.
- Because Highbridge Road is narrow, vehicles often have difficulty making the right turn from northbound US 130.
- The crest of a hill, on US 130, south of Highbridge Road reduces sight distance for vehicles exiting from Highbridge Road.
- Traffic on Highbridge Road conflicts with traffic on Hogback Road because of the lack of traffic control at that intersection and has created a safety problem.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified in Target Area C1 (Mansfield, Florence and Bordentown Townships).

Short Term

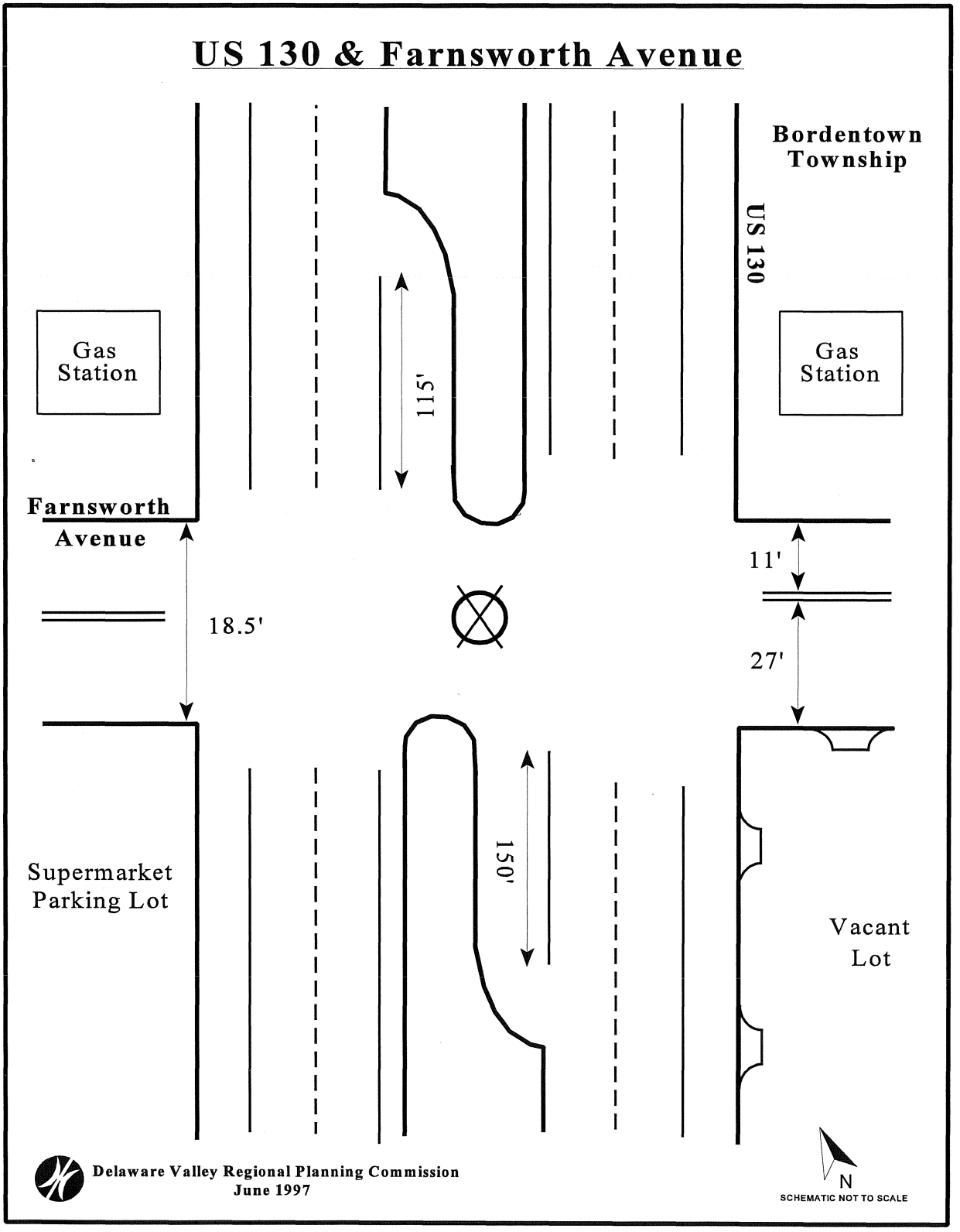
- Encourage alternative access routes between US 130 and the correctional facility such as Ward Avenue or Groveville Road

- Cut back the southeast corner to increase the turning radius for northbound US 130 right turns.
- Investigate the possibility of installing stop signs at the intersection of Highbridge Road and Hogback Road.
- Investigate the possibility of installing stop signs or other traffic calming strategies along Willow Street and Charles Bossert Drive to discourage the high speed cut through traffic through this residential area.

Long Term

- The township, county and NJ DOT should work with the developer of the property located in the quadrant east of US 130 and south of Highbridge Road to construct internal circulation roadways which will provide the necessary access to US 130 for not only the new development but also the existing land uses within this portion of the township.
- Signalize the entrance to the new development and close off the existing median break on US 130 at Highbridge Road. This would encourage use of the signalized intersection and new internal circulation roads to reach the correctional facility.
- Consider amending the circulation element of the township master plan to address the following connections: provide a connection from US 130 to Amboy Road/US 206 by utilizing the same traffic signal installed at the development entrance, extend the internal circulation road through the new development to Hogback Road, consider construction of a frontage road parallel to US 130 which would provide access to Circuit Foil USA, the Square D Site, and Agway (the frontage road would access US 130 at the new development signal).

FIGURE 8


US 130 & Farnsworth Avenue
Bordentown Township
US 130
Gas Station
Gas Station
115'
Farnsworth Avenue
18.5'
11'
27'
150'
Supermarket Parking Lot
Vacant Lot
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

2. US 130 AND FARNSWORTH AVENUE (CR 545) MILE POST: 55.4

Bordentown Township

Existing Conditions:

Operations at this four-leg intersection are controlled by a traffic signal. US 130 carries two travel lanes in each direction plus shoulders. The approaches are supplemented by center left turn lanes in each direction. Beyond the center left turn lanes, the roadway is separated by a grass median. The eastern leg of Farnsworth Avenue is 38 feet wide (an 11-foot approach lane and a 27-foot departure lane). The departure lane is afforded extra width to accommodate trucks from northbound US 130 turning right onto eastbound Farnsworth Avenue. This lane eventually tapers down to 19 feet. The western leg of Farnsworth Avenue is 38 feet wide and carries one lane in each direction.

Gas stations are located in the northern quadrants of the intersection. An Acme parking lot is located on the southwest corner and the southeast corner is a vacant dirt lot. The speed limit on US 130 is 40 MPH in the northbound direction and 55 MPH in the southbound direction. The speed limit on Farnsworth Avenue is posted at 35 MPH.

The completion of the missing link of I-295 through Bordentown Township and into Mercer County has reduced the traffic impact on US 130 and on US 206 through Bordentown Township. Previous to the opening of this facility, traffic used US 206 and US 130 through Bordentown Township as a bypass of the uncompleted highway.

A traffic count conducted by DVRPC in 1994 indicated an AADT of approximately 46,000 vehicles on US 130 just south of Farnsworth Avenue. Subsequent counts, taken in 1995 and 1996 after the opening of the section of I-295 north of US 130, indicated a significant reduction in traffic on US 130. Volumes dropped to the 24,000 to 28,000 range.

New Jersey Transit is evaluating the potential for light rail transit service on the Conrail line which runs generally parallel to US 130 from Camden to Trenton. This evaluation includes examining the potential for locating a stop along the line at the location where the rail line crosses Farnsworth Avenue in Bordentown. This location is approximately three-quarters of a mile from US 130 and could have an impact on the turning movements at the intersection of Farnsworth Avenue and US 130.

Identified Problems:

- Discussions centered around the difficulties that northbound US 130 truck traffic had making right turns at this intersection.
- Even though the northbound approach has a shoulder and the eastbound departure lane is 27

feet wide, trucks were observed encroaching on the curb and sidewalk while making a northbound right turn.

- Prior to the completion of I-295 north of US 130, the US 130 northbound left turn lane at Farnsworth Avenue got congested in the PM peak and queues often spilled over into the through lane. To address this problem, discussion often refered to construction of a reverse jughandle to accommodate the northbound left turns. However, Traffic congestion in the intersection, especially northbound left turns, has greatly decreased since the opening of the new section of I-295 and the need for a northbound jughandle appears to have been eliminated.
- The opening of I-295 nouth of US 130 has eliminated one problem but contributes to another. Southbound I-295 truck traffic exits onto northbound US 130 and turns right at Farnsworth Avenue to reach the trucking facilities in the vicinity of Rising Sun Road and US 206 as well as the NJ Turnpike.
- An existing alternative to this movement is to exit I-295 southbound onto US 130 southbound and turn left onto Dunn's Mill Road to reach US 206. The disadvantage of this route is the high school and residences located along Dunn's Mill Road.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified in Target Area C1 (Mansfield, Florence and Bordentown Townships).

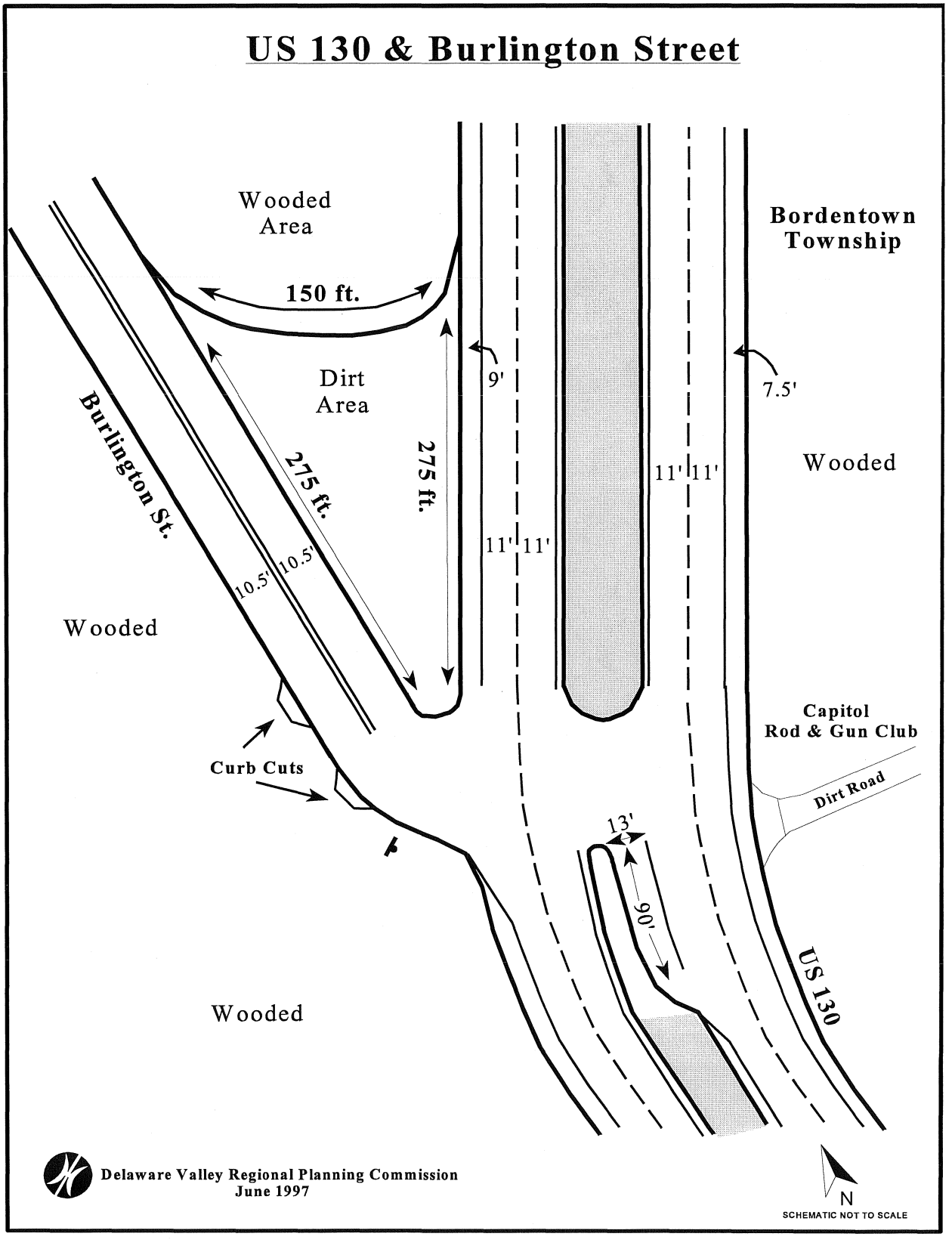
Short Term

- Conduct a circulation study which identifies the movements between I-295 northbound / southbound and Rising Sun Road/US 206/NJ Turnpike area. As part of this study, evaluate the impacts of relocating the traffic signal and jughandles from Dunn's Mill Road to Rising Sun Road and providing a median break there. With this relocation, trucks from southbound I-295 could exit onto US 130 southbound and turn left onto Rising Sun Road to reach the truck facilities, US 206 or the Turnpike.
- Evaluate the signing on northbound I-295 and northbound US 130 to determine its adequacy in directing traffic to US 206 or the NJ Turnpike. Upgrade this signing if necessary. This should reduce the traffic using the US 130 and Farnsworth Avenue intersection to get to the NJ Turnpike or US 206. A much better alternative is to use Rising Sun Road.
- Conduct peak period turning movement counts and evaluate the need to provide treatment for turning movements from Farnsworth Avenue (turn lanes or modifying the signal timing to provide a protected left turn phase).

Long Term

- If right turning problems still exist after rerouting truck traffic destined to the NJ Turnpike or US 206, construct a northbound right turn lane utilizing the vacant lot on the southeast corner.

FIGURE 9


US 130 & Burlington Street
Wooded Area
150 ft.
Dirt Area
275 ft.
275 ft.
Burlington St.
10.5'
10.5'
Wooded
Curb Cuts
9'
11'
11'
Bordentown Township
7.5'
11'
11'
Wooded
Capitol Rod & Gun Club
Dirt Road
13'
90'
US 130
Wooded
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

3. US 130: FROM BURLINGTON STREET (CR 662) TO HEDDING KINKORA ROAD (CR 678)

MILE POST: 53.5 TO 52.6

Bordentown and Mansfield Townships

Existing Conditions:

The scale of the potential development in the vicinity of these two intersections requires the coordination of improvements along US 130 as well as potential improvements which may be required to the county and local road networks.

Burlington Street intersects US 130 at an oblique angle. Traffic operations at this three-leg intersection are controlled by a stop sign on Burlington Street. US 130 consists of two 11-foot travel lanes in each direction. A two-foot inside shoulder and a nine-foot outside shoulder are also provided for both directions. The northbound and southbound directions are separated by a grass median. In the northbound direction, a center left turn lane is provided. This left turn lane is 13 feet wide and 90 feet long. Burlington Street is 21 feet wide and carries one lane in each direction. A small gated driveway to a dirt road on US 130 northbound, opposite Burlington Street, provides access to the Capitol Rod and Gun Club. The land use surrounding the intersection is wooded. A dirt area in the northwest corner is frequently used by trucks from southbound US 130 to turn right onto Burlington Street. This turning movement is easier than going to the actual intersection because the turning radius there is very tight for trucks. Because of the grade and curve on US 130, vehicles in the northbound left turn lane and vehicles exiting Burlington Street are not visible to southbound traffic until that traffic is within approximately 585 feet of the intersection. The posted speed limit on US 130 is 50 MPH.

Hedding Kinkora Road intersects US 130 at a four-leg unsignalized intersection. A median break on US 130 allows all turning movements through the intersection. A left turn lane is provided on southbound US 130. Traffic operations are controlled by stop signs on Hedding Kinkora Road. Like the previous intersection at Burlington Street, this intersection is located in a valley and sight distance is partially restricted because of the vertical curve. Traffic from potential developments located along US 130 in Mansfield and Bordentown Townships is expected to impact these intersections.

Identified Problems:

- Sight distance is limited on the southbound US 130 approach to both Burlington Street and Hedding Kinkora Road due to the horizontal and vertical curve of US 130.
- The turning radius is very tight for southbound vehicles on US 130 turning right onto

Burlington Street.

- Vehicles making a left from Burlington Street onto northbound US 130 frequently encroach on the grass median.
- Vehicles making a left from Hedding Kinkora Road onto southbound US 130 experience restricted sight distance.
- Development of the property adjacent to the northbound side of US 130, in the vicinity of Burlington Street, has the potential for several hundred homes on this site.
- The possibility exists for commercial development in the wedge between US 130 southbound and Burlington Street.
- The proposed Crystal Lake Development by E'town Properties, located east of US 130 between Hedding Kinkora Road and Burlington Street, is projected to add traffic from approximately 700 homes onto the road network in this vicinity.

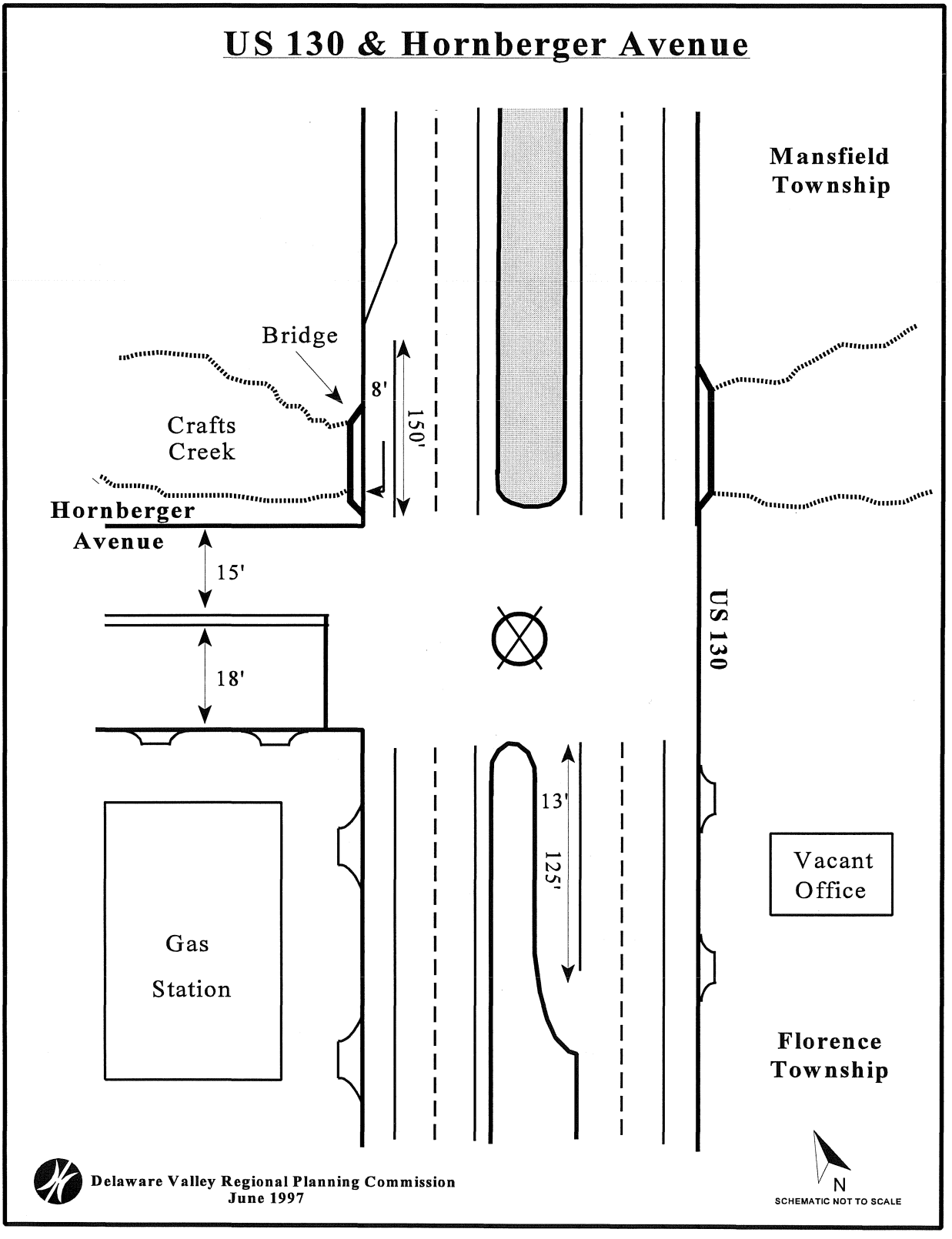
Potential Improvement Scenarios:

Improvements at this location will address challenges identified in Target Area C1 (Mansfield, Florence and Bordentown Townships).

Long Term

- Realign Burlington Street into US 130 at a 90 degree angle and move this intersection north towards the crest of the hill where it could be tied into the potential commercial and residential development on either side of US 130. This will help eliminate the existing sight distance problem and facilitate access to the potential developments.
- Install a traffic signal at the realigned Burlington Street intersection and provide appropriate treatment for the left turn movements from US 130 (jughandles or center left turn lanes).
- Install a traffic signal at the Crystal Lake development entrance and improve local circulation by providing appropriate connections from the development to the existing road network (Hedding Kinkora Road, Ax Factory Road). These connections relieves the pressure on the access to US 130. Because the Hedding Kinkora Road intersection is located in a valley, a signal is recommended at the Crystal Lake development access and connections are recommended to the local roads, a traffic signal is not recommended for the Hedding Kinkora Road intersection.
- Close off the median break at the existing Burlington Street and Hedding Kinkora Road intersection.
- Both townships should monitor the operating conditions on the local road network including the intersection of Bordentown-Hedding Road and Rising Sun Road to determine the impacts of the developments in the vicinity.

FIGURE 10


US 130 & Hornberger Avenue
Mansfield Township
Bridge
8'
150'
Crafts Creek
Hornberger Avenue
15'
18'
US 130
13'
125'
Vacant Office
Gas Station
Florence Township
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

4. US 130 AND HORNBERGER AVENUE MILE POST: 51.6

Florence Township

Existing Conditions:

A traffic signal controls operations at this three-leg intersection. US 130 provides two travel lanes plus shoulders in each direction. A grass median separates the northbound and southbound lanes. A 125-foot center left turn lane is available on the northbound approach. In addition to the two through lanes on the southbound approach, an eight-foot wide right turn lane is also provided. Hornberger Avenue consists of an 18-foot approach lane and a 15-foot departure lane. The northern leg of the intersection carries a bridge over Crafts Creek. The land use adjacent to the intersection consists of the creek, a gas station and a small vacant office building. The intersection is located in a valley.

New Jersey Transit is evaluating the potential for light rail transit service on the Conrail line which runs generally parallel to US 130 from Camden to Trenton. This evaluation includes examining the potential for locating a stop along the line in the vicinity of Hornberger Avenue in Florence Township. This location is approximately one-quarter of a mile from US 130 and would have an impact on the turning movements at the intersection of Hornberger Avenue and US 130.

In addition, Florence Township and the County have undertaken efforts to revitalize the former Roebling Steel Mill, now defunct and a Superfund Clean-up Site. Improved access from US 130 is critical to the revitalization efforts as well as as the success of the LRT stop.

A traffic count conducted by DVRPC in 1995 indicated an annual average daily traffic (AADT) of approximately 19,600 vehicles on US 130 just south of Hornberger Avenue.

Identified Problems:

- Sight distance to the intersection is limited for vehicles on US 130 due to the grade.
- Municipal officials are hopeful of future redevelopment of the former Roebling Steel Mill. If industrial activity resurfaces on this site, Hornberger Avenue will serve as the easiest access from US 130.
- The northbound left turn lane is 125 feet long which would be insufficient when the LRT stop is operational and the Roebling site is redeveloped.
- The southbound right turn lane is only eight feet wide and the turning radius is tight for

trucks.

- The intersection is adjacent to Crafts Creek which restricts improvement possibilities.
- Access to potential light rail service also increases the use of Hornberger.
- Municipal officials have expressed a desire to improve Hornberger Avenue, its connection to US 130 and its access to potential development activities in that part of the township.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A1 (Roebling Village and Steel Mill Site - Florence Township).

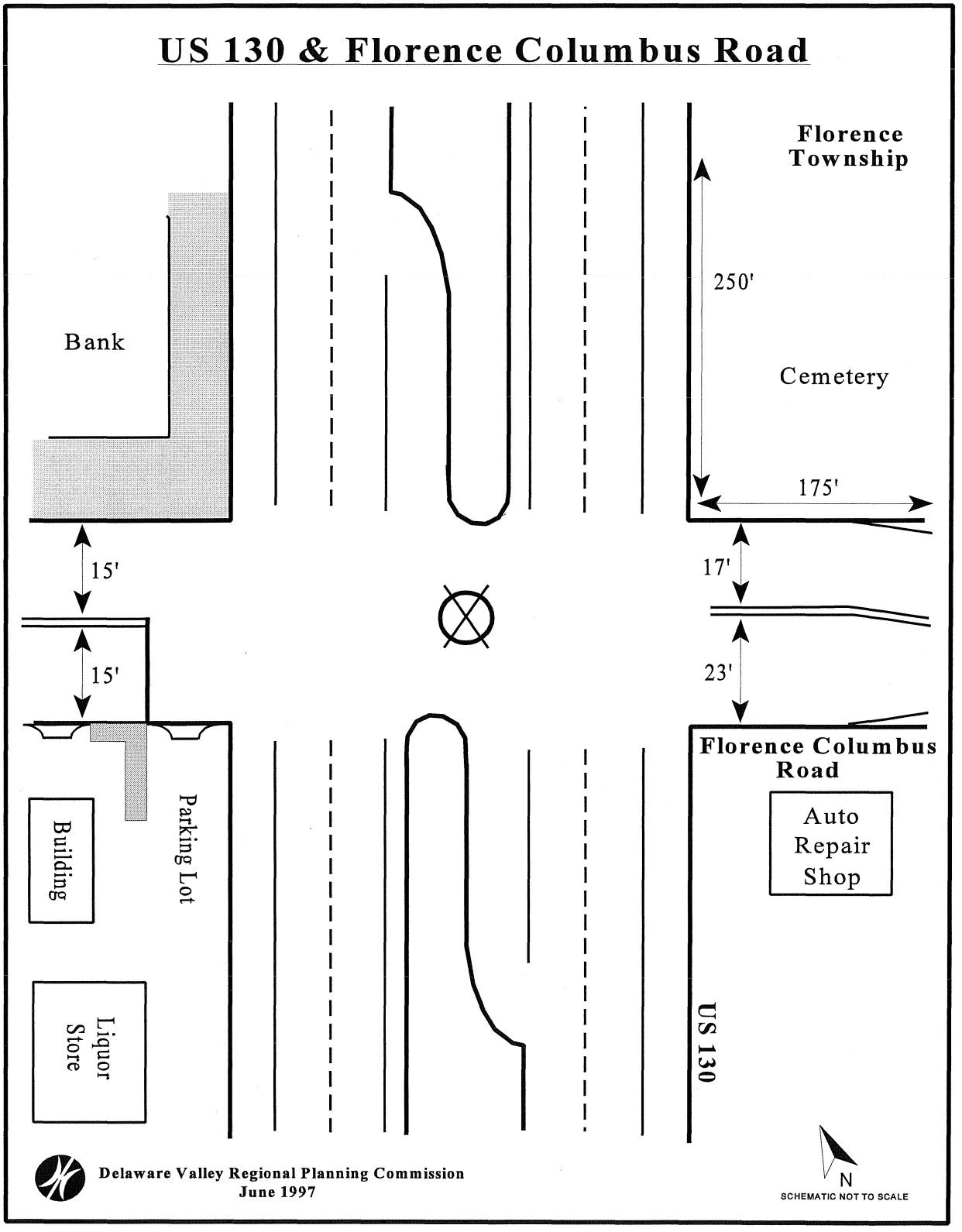
Short Term

- Florence Township should work together with New Jersey DOT to identify the best intersection configuration for US 130 and Hornberger Avenue, including treatment of turning movements. This should include examining the following scenarios:
  - lengthening the existing left turn lane
  - eliminating the existing left turn lane and constructing a near side jughandle for northbound left turns on the property now occupied by the vacant building
  - relocating the existing intersection approximately 200 feet to the south, providing a reverse jughandle for northbound left turns on the property now occupied by the vacant building and providing a southbound right turn lane.

Long Term

- Widen and straighten Hornberger Avenue between US 130 and the rail line to provide an attractive access road to serve the expected increases in auto and truck traffic due to the potential development and redevelopment in this area of the township.
- Improve the connection of Hornberger Avenue to US 130 taking into consideration improved treatment for turns from US 130.

FIGURE 11


US 130 & Florence Columbus Road
Florence Township
250'
Bank
Cemetery
175'
15'
17'
15'
23'
Florence Columbus Road
Auto Repair Shop
Parking Lot
Building
Liquor Store
US 130
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

5. US 130 AND FLORENCE COLUMBUS ROAD (CR 656) MILE POST: 50.3
Florence Township

Existing Conditions:

US 130 carries two travel lanes and a center left turn lane in each direction at this signalized intersection. Shoulders are also provided on US 130. The western leg of Florence Columbus Road is 30 feet wide; a 15-foot lane in each direction. The approach lane on this leg is afforded a lead green interval. The eastern leg is 40 feet wide at the intersection; a 17-foot approach lane and a 23-foot departure lane. Extra width is provided on the departure lane to accommodate the large trucks turning right from northbound US 130. Approximately 200 feet west of the intersection, Florence Columbus Road carries a 12-foot lane in each direction plus an 11-foot shoulder on the eastbound side. The speed limit on Florence Columbus Road is 50 MPH. A cemetery is located on the northeast corner and is situated close to the roadway. The cemetery has a 175-foot frontage on Florence Columbus Road and a 250-foot frontage on US 130. A bank is located on the northwest corner. An auto repair business is located on the southeast corner. The southwest corner has a parking lot for a small insurance office and a liquor store.

A traffic count conducted by DVRPC in 1993 indicated an AADT of approximately 20,100 vehicles on US 130 just north of Florence Columbus Road.

Identified Problems:

- Florence Columbus Road carries a significant number of trucks because it provides a direct connection between US 130 and I-295.
- The primary problem at this intersection is the congestion on the westbound approach. Although this lane is 17 feet wide, through and right turning vehicles are frequently obstructed from passing around vehicles queued up to turn left because of the large number of trucks in the mix.
- Right turning trucks from northbound US 130 frequently jump the curb on the southeast corner. These trucks were observed crossing the center line and encroaching into oncoming traffic on Florence Columbus Road.
- The truck traffic is expected to increase at this location due to the opening of the Food Distribution Center and proposed new interchange between the New Jersey Turnpike Extension and US 130.
- The ramps to and from the interchange are proposed to touch down on US 130 between Florence Columbus Road and Florence Bustleton Road/Cedar Lane.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A2 (Food Distribution Center and US 130 Area - Florence and Burlington Townships).

Short Term

- Improvements to this intersection have been proposed in conjunction with the turnpike interchange project and are expected to include:
  - construct a reverse jughandle around the cemetery for northbound US 130 left turns
  - eliminate the northbound center left turn lane
  - upgrade the shoulder on US 130 to provide a northbound right turn lane onto eastbound Florence Columbus Road and an additional northbound lane on the farside of the intersection to access the reverse jughandle
  - widen both approaches of Florence Columbus Road to provide a left turn lane and a shared through and right turn lane.

6. FLORENCE COLUMBUS ROAD (CR 656): FROM US 130 TO I-295

Florence Township

Existing Conditions:

This two-lane facility provides direct access between US 130 and Interchange 52 along I-295 and therefore carries a significant amount of truck traffic. A recent residential development, in the vicinity of US 130, widened the cartway along CR 656 to include an 11-foot shoulder on the south side for approximately 2,500 feet. The remainder of this segment has no shoulders. CR 656 crosses over the New Jersey Turnpike Extension on a bridge. The cross section of the bridge consists of an 11-foot lane, a 4-foot shoulder and a 3-foot sidewalk in each direction. There are no sidewalks along the remainder of the road. The road surface of the bridge is in poor condition. The adjacent land use along this road is primarily agricultural. The posted speed limit is 50 MPH.

A traffic count conducted by DVRPC in 1994 indicated an AADT of approximately 8,900 vehicles on Florence Columbus Road just west of I-295.

Identified Problems:

- Traffic, especially truck traffic, on this road is expected to increase as a result of the Food Distribution Center and the proposed new interchange between the New Jersey Turnpike Extension and US 130.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A2 (Food Distribution Center and US 130 Area - Florence and Burlington Townships).

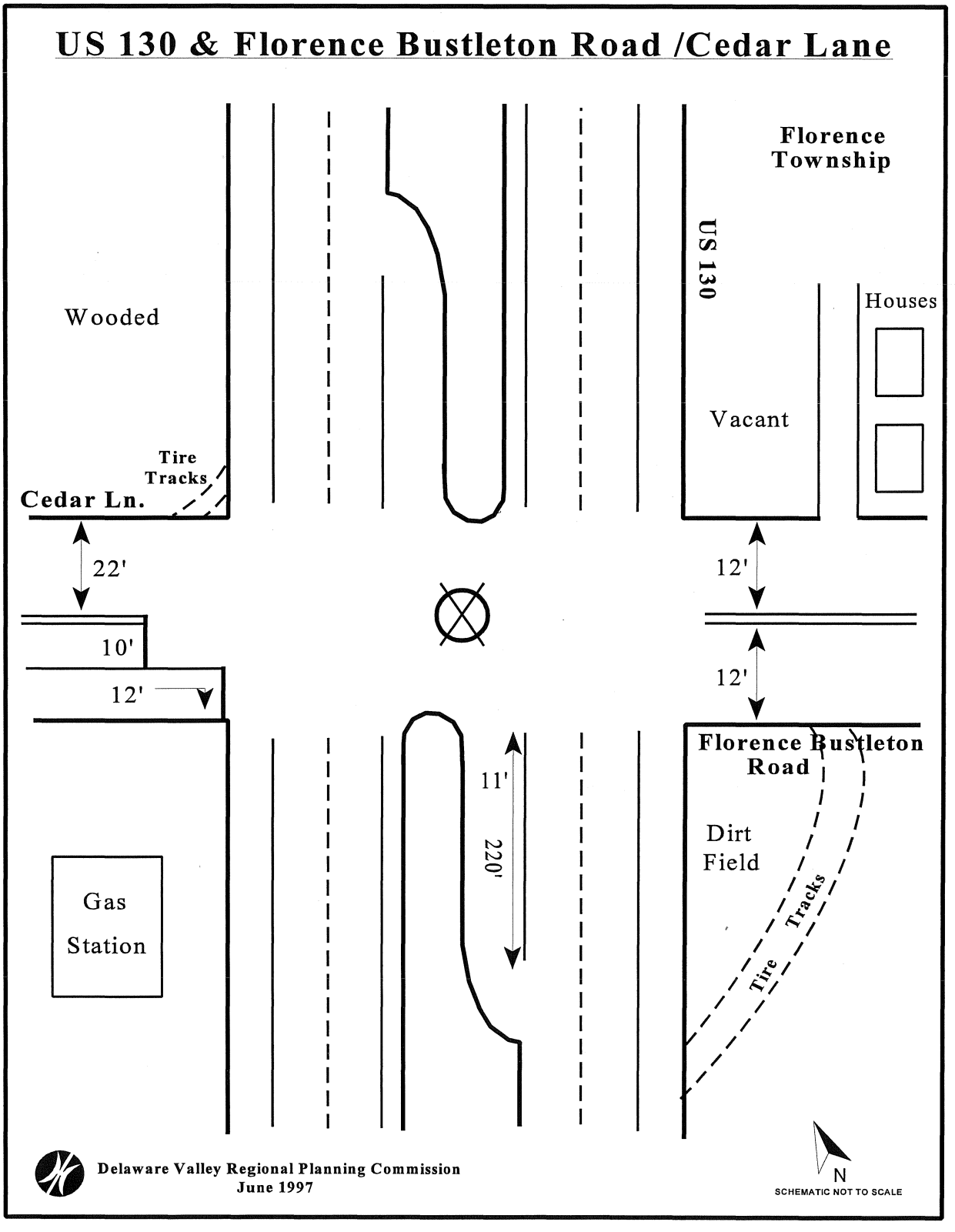
Short Term

- Florence Columbus Road should at the least be upgraded to AASHTO (American Association of State Highway and Transportation Officials) standards for lane and shoulder widths. These standards include 12-foot travel lanes and 8-foot shoulders. The traffic conditions should be monitored to determine the impacts of the new turnpike interchange, the Food Distribution Center and local development on this road.

Long Term

- The construction of the NJ Turnpike interchange at US 130 and the development of the Food Distribution Center will bring heightened importance to this road for the mobility of this section of the corridor. If the traffic increases as expected, this road should be widened to four lanes between US 130 and I-295.

FIGURE 12


US 130 & Florence Bustleton Road /Cedar Lane
Florence Township
US 130
Houses
Wooded
Vacant
Tire Tracks
Cedar Ln.
22'
12'
10'
12'
12'
11'
220'
Florence Bustleton Road
Dirt Field
Tire Tracks
Gas Station
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

7. US 130 AND FLORENCE BUSTLETON ROAD / CEDAR LANE (CR 659) MILE POST: 50.1

Florence Township

Existing Conditions:

US 130 carries two travel lanes plus a center left turn lane in each direction through this signalized intersection. The northbound left turn lane is 220 feet long. Both the northbound and southbound left turn lanes are provided a protected movement. Cedar Lane, the western leg of the intersection consists of a 12-foot wide right turn lane that is 175 feet long and a 10-foot wide shared through and left turn lane. The departure lane on this leg is 22 feet wide to accommodate the large number of turning trucks. Florence Bustleton Road, the eastern leg of the intersection, consists of a 12-foot approach lane and a 12-foot departure lane. There is a gas station located on the southwestern corner of the intersection. The northeast and southeast corners are undeveloped. The northwest quadrant is wooded and tire tracks were observed on the corner of this quadrant indicating a tight turning radius for larger vehicles. The Cedar Lane bridge over the Conrail tracks, located approximately 1,000 feet west of US 130, is posted for a 4 ton weight restriction.

Identified Problems:

- This intersection experiences heavy turning movements to and from Cedar Lane because Cedar Lane provides westbound access to and eastbound access from the New Jersey Turnpike Extension.
- In addition to the turnpike access, several light industrial/warehousing facilities are located along Cedar Lane north of the rail line, generating additional truck traffic.
- Trucks turning left from northbound US 130 can have difficulty making this maneuver depending where the vehicles are queued on the eastbound Cedar Lane approach.
- Tire tracks in the dirt area on the southeast corner indicate that some northbound vehicles are using this area as a defacto nearside jughandle.
- Tire tracks on the northwest corner indicate a problem for vehicles turning right from southbound US 130.
- The proposed access to the Food Distribution Center includes a connection to Cedar Lane.

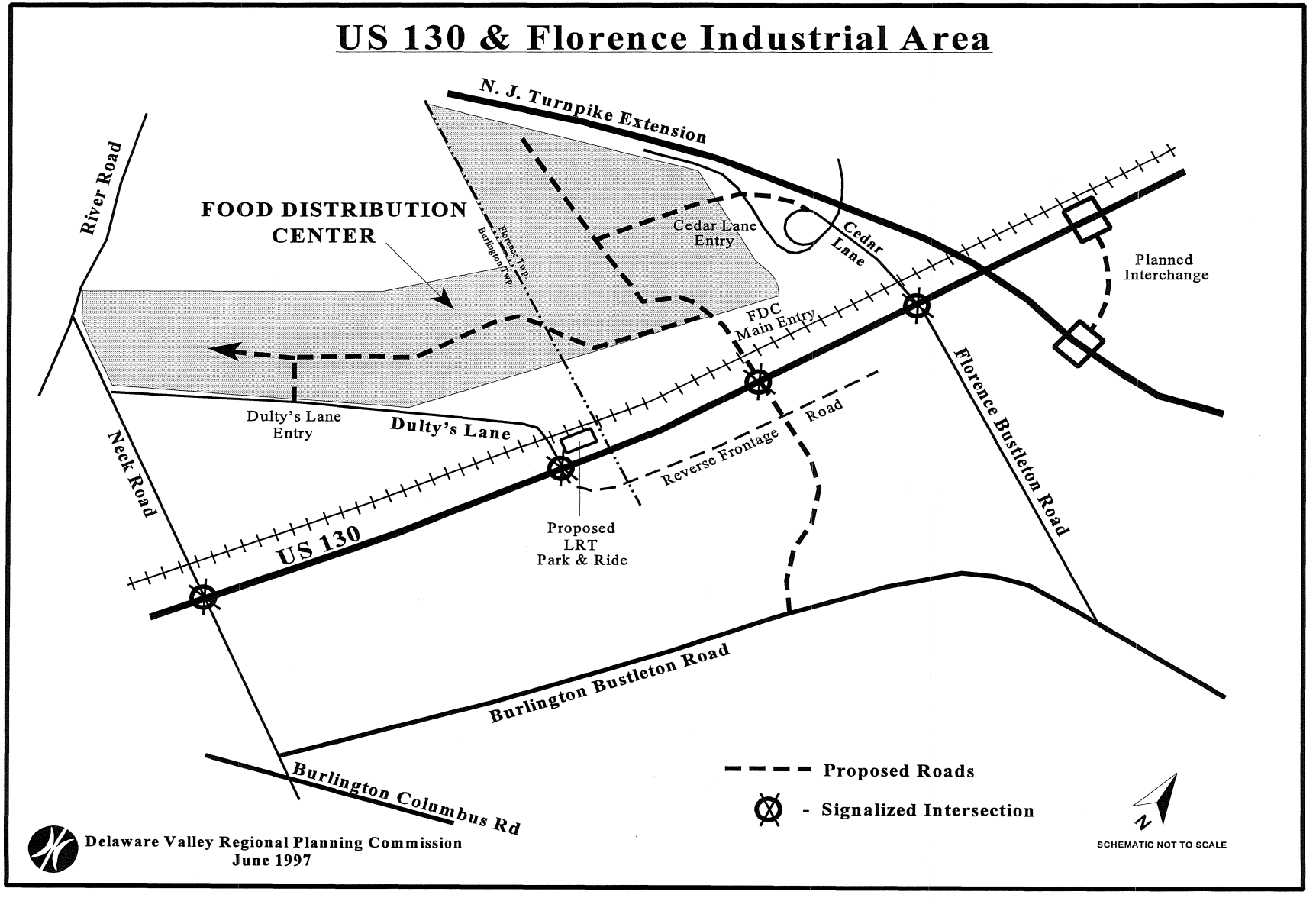
Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A2 (Food Distribution Center and US 130 Area - Florence and Burlington Townships).

Short Term

- Improvements to this intersection have been proposed in conjunction with the turnpike interchange project and are expected to include:
  - construct near-side jughandles for both northbound and southbound US 130 left and right turns
  - eliminate the center left turn lanes
  - widen Florence Bustleton Road to provide a left turn lane and a shared through and right turn lane on the westbound approach
  - widen US 130 to provide acceleration/deceleration lanes for the new interchange ramps.

FIGURE 13


US 130 & Florence Industrial Area
N. J. Turnpike Extension
River Road
FOOD DISTRIBUTION CENTER
Florence Twp.
Burlington Twp.
Cedar Lane Entry
Cedar Lane
Planned Interchange
FDC Main Entry
Florence Bustleton Road
Dulty's Lane Entry
Dulty's Lane
Neck Road
Reverse Frontage Road
US 130
Proposed LRT Park & Ride
Burlington Bustleton Road
Burlington Columbus Rd
Proposed Roads
- Signalized Intersection
N
SCHEMATIC NOT TO SCALE
Delaware Valley Regional Planning Commission
June 1997

8. US 130 AND FLORENCE INDUSTRIAL AREA MILE POST: 49.6 (APPROX.)

Florence Township

Proposed Conditions:

The initial phase of the New Jersey Food Distribution Center is proposed to consist of over 3.4 million square feet of development in Burlington and Florence Townships with primary access onto US 130. This proposed access point is located in Florence Township approximately halfway between Dulty's Lane in Burlington Township and Florence Bustleton Road/Cedar Lane in Florence Township. This main access road would create a three-leg signalized intersection and be about one-half mile from the adjacent signalized intersections. The concept plan identifies secondary access points onto Dulty's Lane and Cedar Lane. A possible access onto River Road would occur in the last phase of the project if necessary . These auxiliary access locations will help reduce the impact on the main driveway at US 130.

The property on the east side of US 130 adjacent to the proposed Food Distribution Center access road is a mix of agricultural and wooded land with a few light industrial uses along US 130. Florence Township has zoned this undeveloped land on the eastern side of US 130 for light industrial uses and hopes to encourage development there.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 21,200 vehicles on US 130 in the vicinity of the proposed main access.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A2 (Food Distribution Center and US 130 Area - Florence and Burlington Townships).

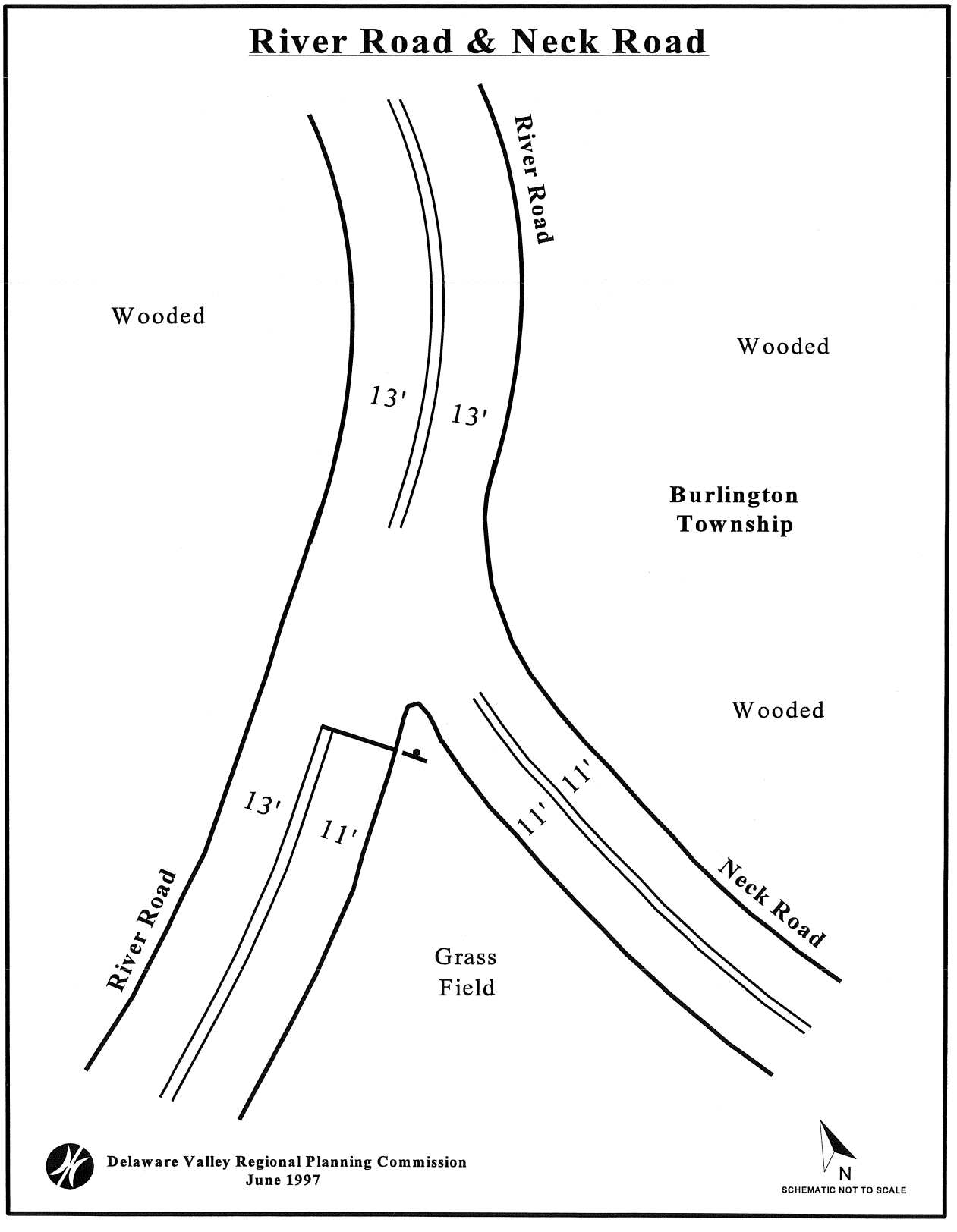
Short Term

- Florence and Burlington Townships should amend the circulation element of their Master Plans to identify the concept of a reverse frontage road and an industrial access road which would intersect US 130 at the Food Distribution Center access road.

Long Term

- Construct an access road for the industrially zoned properties on the east side of US 130 that would intersect US 130 adjacent to the Food Distribution Center access road and create a signalized four leg intersection. This industrial access road could potentially extend from US 130 in an eastbound direction to Burlington Bustleton Road (CR 661) and help to enhance the internal circulation and mobility in Florence Township. This industrial access road could be bisected by another road running generally parallel to US 130 and would create additional industrial lots with reverse frontage to US 130.

FIGURE 14


River Road & Neck Road
River Road
Wooded
Wooded
13'
13'
Burlington
Township
Wooded
13'
11'
11'
11'
Neck Road
River Road
Grass
Field
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

9. RIVER ROAD (CR 656) AND NECK ROAD (CR 658)

Burlington Township

Existing Conditions:

Traffic control at this three-leg intersection consists of a stop sign on northbound River Road. The southern leg of the intersection consists of an 11-foot approach lane and a 13-foot departure lane. On the northern leg, River Road carries a 13-foot lane in each direction. Neck Road carries an 11-foot lane in each direction. The posted speed limit on both River Road and Neck Road is 40 MPH. An open field is situated between Neck Road and the southern leg of River Road. The other surrounding land uses are wooded areas.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 1,700 vehicles on Neck Road just south of River Road.

Identified Problems:

- The oblique angle of this intersection and a small berm located along River Road's northbound approach lane contribute to the sight distance problem.
- Trucks have difficulty negotiating some of the turns because of the tight turning radius. There are several industrial facilities located along River Road in this vicinity which generate noticeable amounts of truck traffic.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A2 (Food Distribution Center and US 130 Area - Florence and Burlington Townships).

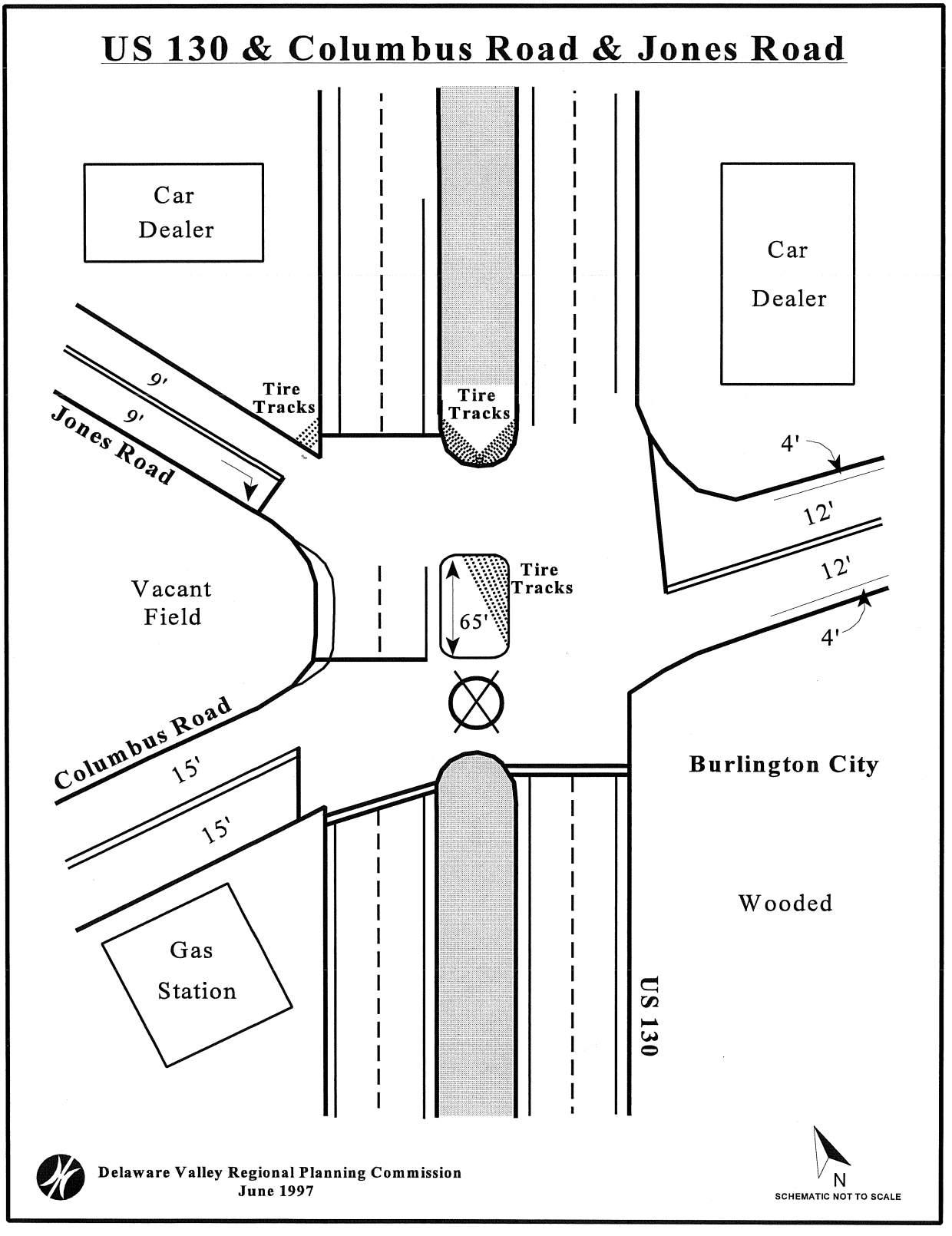
Short Term

- Burlington Township and the County should work together to preserve the vacant parcel between northbound River Road and northbound Neck Road for use in the future improvement scenario.

Long Term

- Use the vacant parcel to the south of the intersection to realign the approaches to form a T-intersection. The concept plan for the Food Distribution Center identifies the main access to be located on US 130 with a secondary access point on Dulty's Lane. A possible access onto River Road would occur in the last phase of the project if necessary. These access points will encourage truck traffic to be directed to US 130 and this intersection along River Road will experience only a minor impact from this development. The stem of the T intersection should be the lower leg of River Road and a stop sign on the northbound River Road approach should provide sufficient traffic control.

FIGURE 15


US 130 & Columbus Road & Jones Road
Car Dealer
Car Dealer
9'
9'
Jones Road
Tire Tracks
Tire Tracks
4'
12'
12'
4'
Vacant Field
Tire Tracks
65'
Columbus Road
15'
15'
Burlington City
Wooded
Gas Station
US 130
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

10. US 130 AND COLUMBUS ROAD (CR 543) AND JONES ROAD MILE POST: 47.1
Burlington City

Existing Conditions:

This five-leg intersection is the result of the confluence of three roads; the northern and southern legs carry US 130, the eastern and western legs carry Columbus Road and the northwestern leg serves as Jones Road. On the southbound side of US 130, there is an approximately 75-foot offset between Columbus Road and Jones Road. Adding to the complexity of this intersection, both Columbus Road and Jones Road, intersect US 130 at oblique angles. A grass median, located in the center of the intersection is approximately 65 feet in length and helps to channel the turning movements through the intersection.

The southern leg of the intersection carries US 130 and consists of two travel lanes plus inside and outside shoulders in each direction, separated by a grass median. Turns from the approach lanes are permitted to Columbus Road. Left turns onto Jones Road from northbound US 130 must proceed through the intersection and pass the center median before turning left. Vehicles were observed encroaching on this center median while negotiating this maneuver.

The northern leg of the intersection carries US 130 and also consists of two travel lanes plus inside and outside shoulders in each direction, separated by a grass median. The only turns permitted from the southbound approach lanes are right turns onto Jones Road. This movement is very minimal because southbound US 130 traffic can turn right onto Bordentown Road which is approximately 1,600 feet north of this intersection and get to the same location that Jones Road gets them to. The narrow lanes on Jones Road and its oblique angle create problems for southbound vehicles turning right. Tire tracks on the median, indicate evidence of vehicles making U-turns from southbound US 130 and left turns from Jones Road even though there are signs which prohibit these movements. Southbound US 130 traffic must pass the center median before making right or left turns onto Columbus Road.

The eastern leg consists of a 12-foot lane and 4-foot shoulder in each direction on Columbus Road. At the intersection, the approach lane fans out to accommodate right turns to US 130 northbound and to Jones Road. It is wide enough that through and right turns can pass around vehicles queued up to turn left. The angle of this leg, in relation to US 130, increases the difficulty for vehicles making a left turn from southbound US 130 onto Columbus Road.

Columbus Road provides a 15-foot lane in each direction on the western leg of the intersection. All movements are accommodated by the approach lane which has sufficient width to permit through and right turns to pass around vehicles queued up to turn left. The angle of the eastbound approach lane in relation to southbound US 130 creates a tight turning radius for right turns.

Jones Road, the fifth leg of this intersection, consists of a nine-foot lane in each direction. The pavement surface on Jones road is in poor condition. The approach lane permits right turns only, although tire tracks across the median on the northern leg of the intersection indicate evidence of left turns from this approach. Jones Road provides direct access from US 130 to US Pipe and Foundry Company and the vacant McNeil Mansion. US Pipe and other industrial uses along River Road generate a noticeable amount of truck traffic which uses Jones Road to access US 130. Access to Burlington Island could potentially be gained from the mansion property. Proposals have been discussed in which the mansion, its grounds and potentially the island would be redeveloped into a hotel and conference center.

Auto dealers are located on the northeast and northwest corners. The southeast corner is a wooded lot that is undeveloped. A gas station is located on the southwest corner. A vacant field lays adjacent to southbound US 130 between Columbus Road and Jones Road.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 6,900 vehicles on Columbus Road just west of US 130.

Identified Problems:

- The alignment of Columbus Road as it crosses US 130 and the presence of the fifth leg (Jones Road) adds to the complexity and congestion at the intersection.
- The absence of left turn lanes on US 130 reduces the capacity of the intersection as left turning vehicles queue up in a travel lane waiting for gaps in oncoming traffic.
- A left turn conflict also exists on Columbus Road as opposing left turns jockey for position while waiting for appropriate gaps.
- Much of the northbound US 130 traffic turning left onto Jones Road was observed encroaching on the center median while negotiating this maneuver.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A4 (Burlington Island - Burlington City).

Short Term

- Cut back the center median on US 130 to facilitate the northbound left turns onto Jones Road.
- Investigate the potential for a split phase in the signal timing for Columbus Road as an approach to eliminate the left turn conflict.
- Resurface Jones Road from US 130 to River Road.

Long Term

Since city officials feel that redevelopment of the McNeil property and the island is vitally important to the economic well being of the city, the long term improvement should be developed with the intent of providing an enhanced access to this property. Depending on the level of employment and the potential users of this site, consideration should be given to locating a stop on the passenger rail line at this site. There is no clear cut preferred improvement at this intersection. Those improvements which have been discussed have both distinct advantages and disadvantages. The City, County and NJ DOT should work together with the community, local businesses and future developer to identify the most appropriate improvement for this area. Below are several improvement options which should be considered when addressing this location.

- Eliminate the fifth leg from the intersection by cul-de-sacing Jones Road. This would require finding a new location to provide access between US 130 and River Road. A potential solution would be to construct an extension of Dugan Street from its existing intersection with Broad Street to River Road. Dugan Street intersects US 130 approximately 1,900 feet north of Jones Road near the old Burlington Coat Factory building and currently extends one block to Broad Street. Broad Street runs parallel to River Road on the east side of the Conrail tracks.

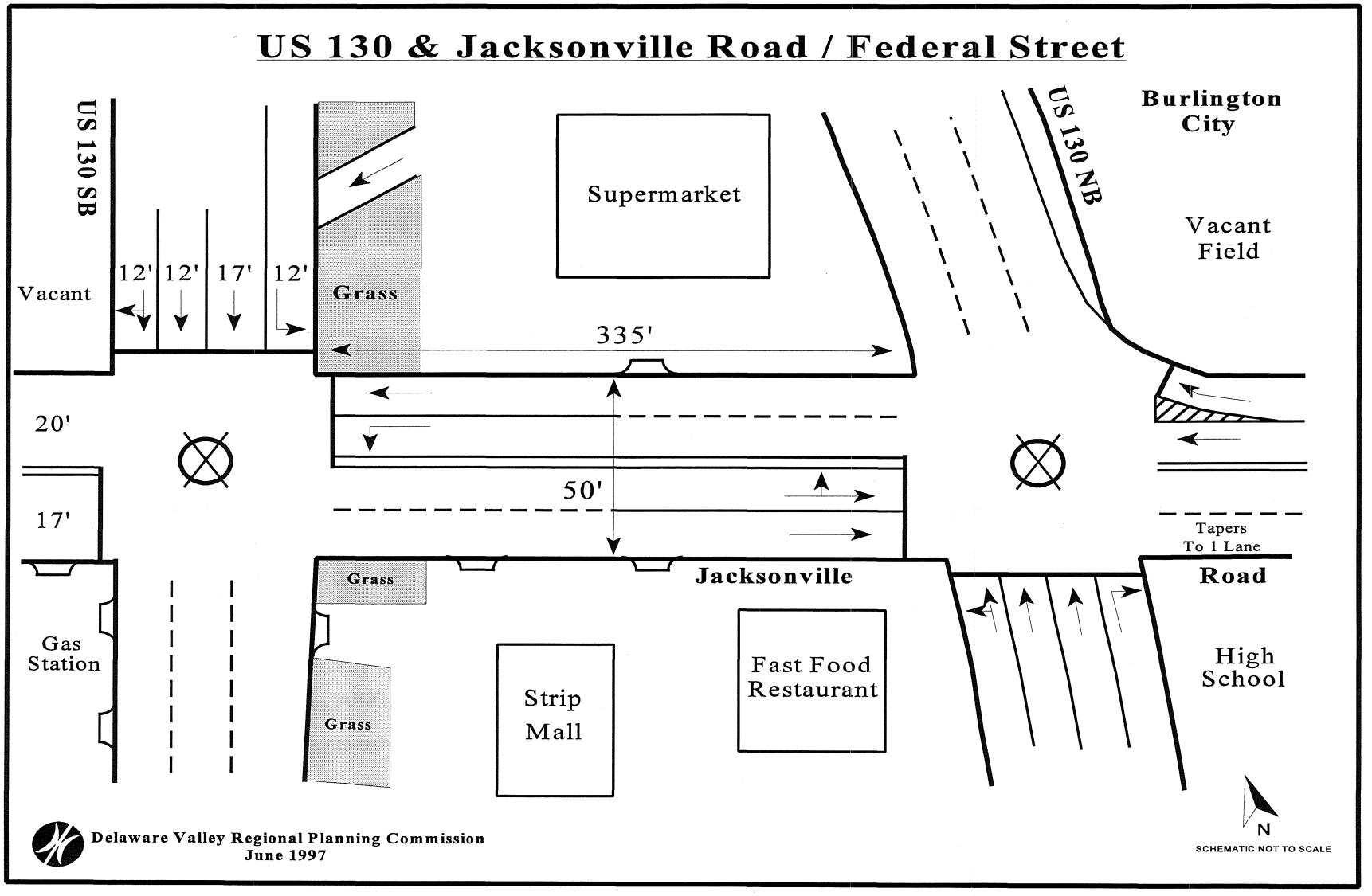
  The existing section of Dugan Street would have to be widened and upgraded. This could potentially be done by encroaching on the parking lot of the adjacent bar. Dugan Street is 29 feet wide curb to curb with no shoulders or lane markings. Three residential properties are located along the south side of Dugan Street. The land use on the north side is comprised predominantly of the parking area for the adjacent bar. The intersection with US 130 would be signalized and a center left turn lane would be constructed in the median for northbound

left turns. This signal would provide benefits to the existing businesses on the northbound side of US 130 which are directly across from Dugan Street. There is currently a center left turn lane in the median to provide access to these businesses for southbound left turns.

The new intersection with River Road would be approximately 500 feet north of the main entrance to US Pipe and approximately 1,800 feet north of the entrance to the McNeil property. This extension of Dugan Street would require a new grade crossing with the Conrail line but the grade crossing at Jones Road could be eliminated. There is a grade differential of several feet between River Road and the rail line which would have to be addressed.

- A variation on the previous scenario would be to change the operation of Jones Road to one way approaching the intersection. This eliminates northbound left turns from US 130 at Jones Road and maintains the direct connection to southbound US 130 for traffic leaving the McNeil property. This scenario would also utilize a Dugan Street extension to River Road. Northbound US 130 left turns would use the center left turn lane at the signalized Dugan Street intersection. Since no left turns would be permitted into or out of Jones Road at US 130 , the center median could be extended to present a physical barrier to this movement. This scenario would still require the provision of green time from the traffic signal for Jones Road. The pavement condition of Jones Road would need to be improved.
- Eliminate the fifth leg from the intersection by relocating Jones Road approximately 600 feet to the north. This would require construction of a new roadway through the open field behind the auto dealer. This new intersection would be signalized and a center left turn lane would be constructed in the median for northbound left turns. All movements would be permitted between US 130 and Jones Road. A potential disadvantage of this option would be the proximity of the new traffic signal to the existing signal at Columbus Road.
- Another scenario is to keep all five legs of the intersection but prohibit left turns from northbound US 130 onto Jones Road or Columbus Road. These movements would be accommodated through the construction of a reverse jughandle around the car dealer on the northeast corner. Jones Road would need to be upgraded. This maintains direct access to the McNeil property from US 130 via Jones Road. The Jones Road approach to US 130 would need to be improved to accommodate vehicles coming from the McNeil Property headed for US 130 northbound. All other operations of the intersection would remain the same.

FIGURE 16


US 130 & Jacksonville Road / Federal Street
US 130 SB
US 130 NB
Burlington City
Vacant
Vacant Field
12'
12'
17'
12'
Grass
Supermarket
335'
20'
17'
50'
Tapers To 1 Lane
Grass
Jacksonville Road
Gas Station
Grass
Strip Mall
Fast Food Restaurant
High School
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

11. US 130 AND JACKSONVILLE ROAD (CR 670)/FEDERAL STREET MILE POST: 46.4
Burlington City

Existing Conditions:

Because US 130 operates as a one way couplet in this area, there are two separate signalized intersections with Jacksonville Road. Although these intersections are only 335 feet apart and have a direct impact on each other's operations, the description of their existing conditions will be presented here separately.

Northbound US 130 carries four lanes into the intersection: a shared through and left turn lane, two through lanes and a right turn only lane. The northern leg carries three lanes of traffic away from the intersection. The western leg has a 50-foot cross section and carries two lanes in each direction with a shared through and left turn lane and a through only lane on the approach. The eastern leg of the intersection offers two eastbound departure lanes that taper down to one lane approximately 400 feet east of the intersection. This leg also provides a through only and a channelized right turn lane into the intersection. A high school athletic field is located in the southeast quadrant. The northeast corner is undeveloped. A fast food restaurant is located on the southwest corner. A supermarket parking lot covers the area north of Jacksonville Road between US 130 northbound and US 130 southbound.

Southbound US 130 also brings four lanes into the intersection. This approach consists of a left turn lane, two through lanes and a shared through and right turn lane. The southern leg has a cross section of 46 feet and carries three lanes away from the intersection. The western leg of this intersection (Federal Street) provides a 20-foot departure lane and a 17-foot approach lane. The eastern leg carries two lanes in each direction with a left turn lane and a through lane on the approach. There is a vacant lot on the northwest corner, a gas station on the southwest corner and a small strip mall on the southeast corner.

Traffic counts conducted by DVRPC in 1995 indicated AADTs of approximately 18,800 vehicles on northbound US 130 and 18,100 vehicles on southbound US 130 just north of Jacksonville Road.

Identified Problems:

The section of Jacksonville Road which connects US 130 northbound and US 130 southbound experiences continuous congestion during the peak periods and often becomes congested at times throughout the day. There are several factors which contribute to the congestion on this

connector:

- The proximity of the signals - only 335 feet separates US 130 northbound from US 130 southbound - limits the stacking area for vehicles queued up on Jacksonville Road
- A significant portion of the signal operation is needed to serve traffic on US 130
- There is heavy truck traffic through these intersections.
- Jacksonville Road serves as part of a designated truck route designed to bypass CR 541 through Burlington City and Burlington Township. Trucks on both northbound and southbound US 130 are directed to use Jacksonville Road to reach I-295 and the New Jersey Turnpike .
- The primary flow of traffic on westbound Jacksonville Road at US 130 southbound is a left turn onto US 130. This movement is provided a single left turn lane on westbound Jacksonville Road even though there is another lane on this approach. Because the through traffic on this approach is much lighter than the left turn volume, the common scenario is a left turn lane filled with vehicles back to US 130 northbound and two or three vehicles using the through lane. This lane assignment is an inefficient use of the available capacity on this approach.
- On eastbound Jacksonville Road at US 130 northbound, the primary traffic flow is straight across US 130 onto Jacksonville Road. This movement is provided access to both approach lanes: a through only lane and a shared through and left turn lane. The majority of vehicles on this approach are a result of left turns from US 130 southbound.
- The traffic signal at US 130 southbound and Jacksonville Road operates on a two-phase cycle. The signal assigns equal time to the eastbound and westbound approaches of Jacksonville Road even though the eastbound volumes are much lighter and the westbound left turns must wait for those vehicles to clear the intersection.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A3 (US 130 Highway Commercial Area and Route 413 Link to the Burlington Bristol Bridge - Burlington City and Burlington Townships).

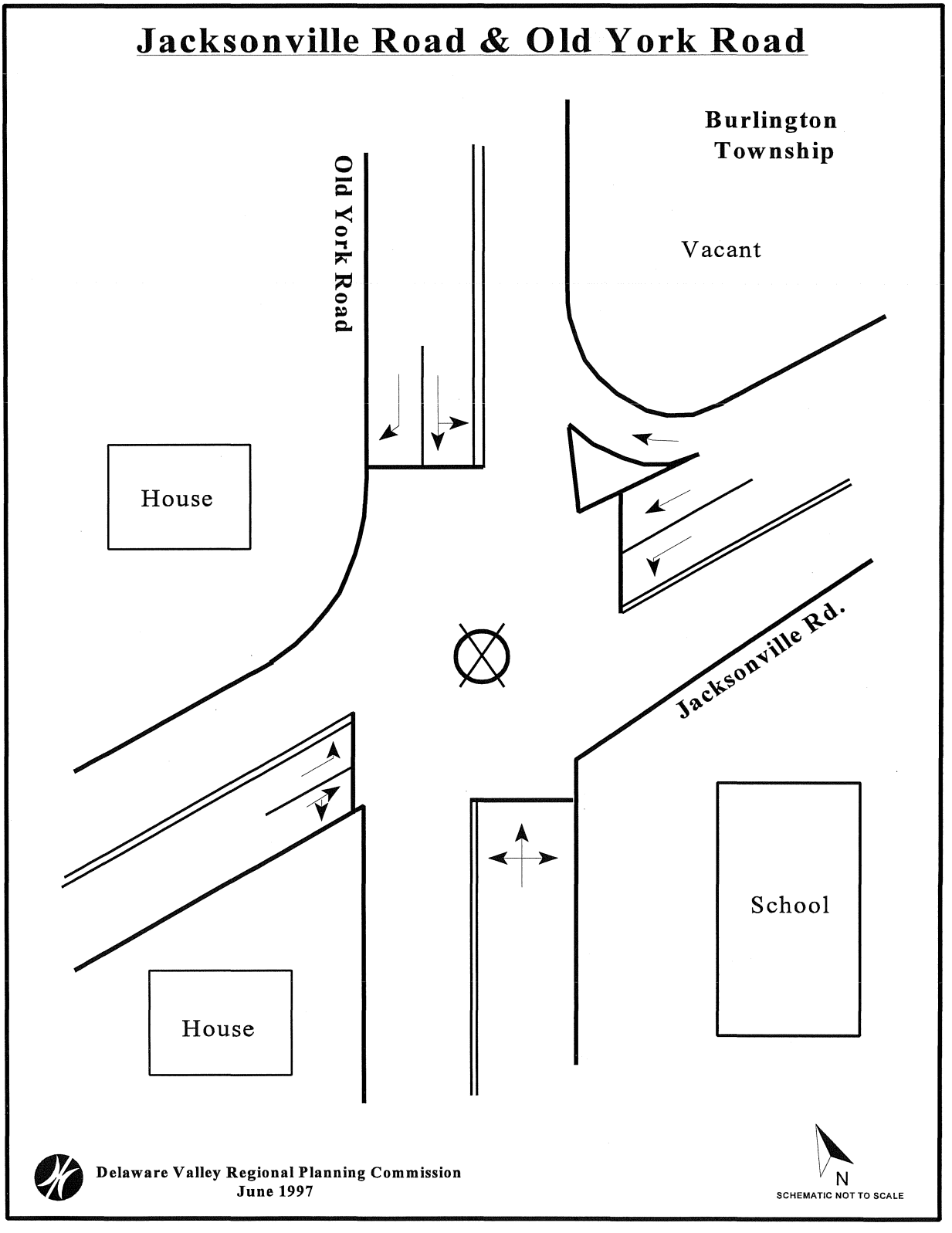
Short Term

- The Mayor suggested making Federal Street a one way street which would carry traffic away from the intersection. In this scenario, traffic operations could be accommodated by a two phase signal and the westbound left turns could run unopposed.
- To increase the capacity of the westbound Jacksonville Road approach to southbound US 130, the through only lane should be converted to a shared through and left turn lane. The

appropriate lane markings and overhead signing should be installed. Southbound US 130 is striped for three departure lanes from this intersection and is sufficiently wide enough to accept two simultaneous left turning vehicles. Include skip tracks to help guide the double left turns through the intersectiion.

- The signal timing at both intersections should be optimized.

FIGURE 17


Jacksonville Road & Old York Road
Burlington Township
Old York Road
Vacant
House
Jacksonville Rd.
School
House
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

12. JACKSONVILLE ROAD (CR 670) AND OLD YORK ROAD (CR 660)

Burlington Township

Existing Conditions:

Operations at this intersection are controlled by a two-phase signal. Jacksonville Road carries one lane in each direction in the vicinity of this intersection. The eastbound and westbound approaches on Jacksonville Road have been upgraded to include a center left turn lane. A channelized right turn lane has also been provided on the westbound approach. Northbound Old York Road carries one lane into the intersection. Southbound Old York Road consists of a right turn only lane and a shared through and left turn lane.

There are houses located in the northwest and southwest quadrants. A school is located in the southeast quadrant and the northeast quadrant is undeveloped.

Traffic counts conducted by DVRPC in 1995 indicated AADTs of approximately 6,500 vehicles on Jacksonville Road west of Old York Road and approximately 3,600 vehicles on Old York Road south of Jacksonville Road.

Identified Problems:

- The problem at this location is that vehicles turning left from Jacksonville Road obstruct the sight distance of the vehicles on the opposing approach. If there are vehicles queued up in the westbound left turn lane, a vehicle approaching the intersection in the eastbound direction that wants to turn left has trouble telling if there is additional westbound traffic coming up to go straight through the intersection.
- The on-coming through traffic is essentially blocked out by the on-coming left turns.
- This situation can occur on both directions of Jacksonville Road.
- These conflicts with the left turns could result in a safety problem.

Potential Improvement Scenarios:

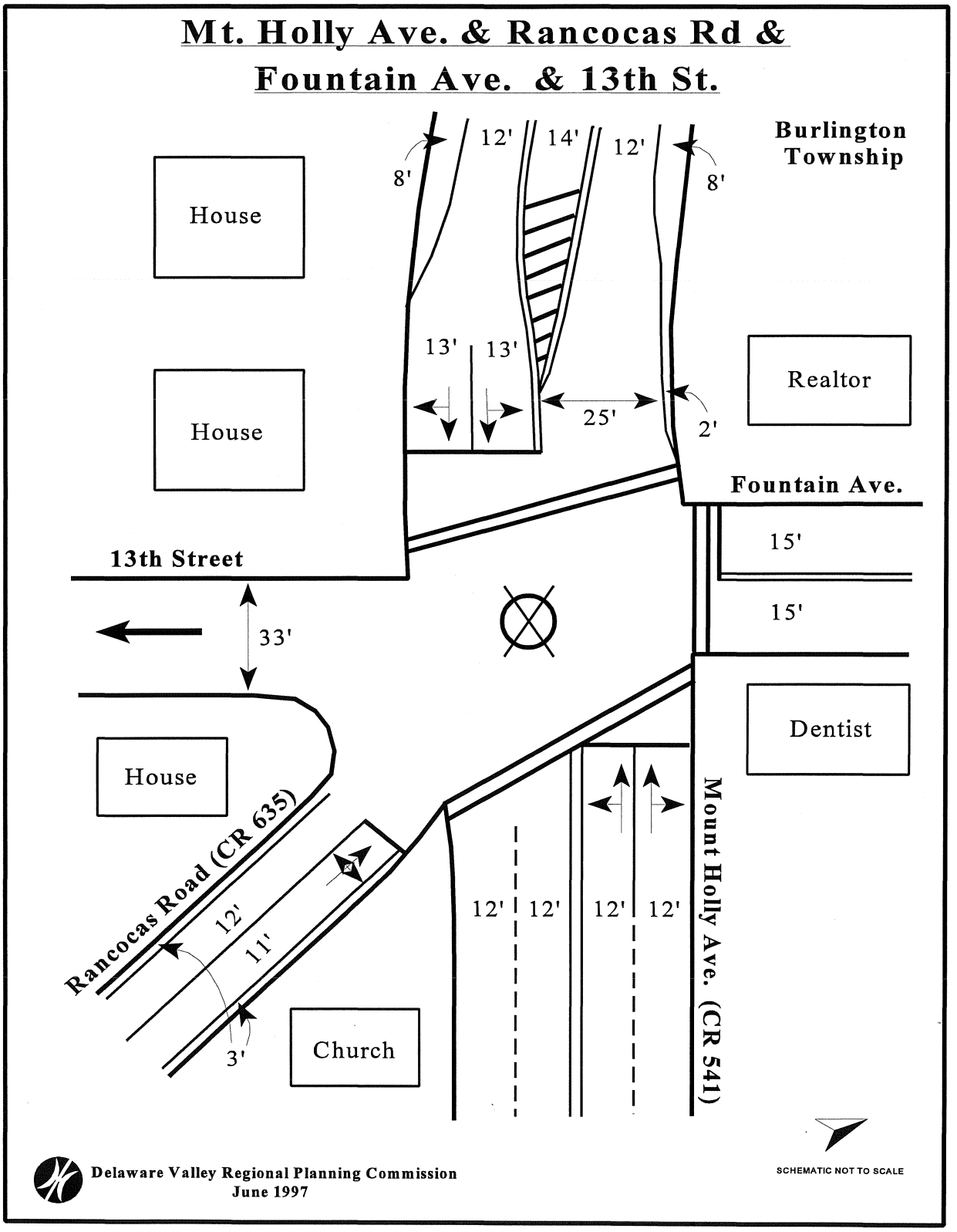
<u>Short Term</u>

- This location has been included in Phase I of a project to install a closed loop traffic signal system along CR 541 and several other signalized intersections in the vicinity. As part of the project, the signal timing at this intersection will be optimized and interconnected with surrounding signalized intersections.
- Provision of a protected left turn phase on Jacksonville Road would address the conflict of vehicles trying to turn left across traffic which is partially obstructed and should be included

in the signal timing plan.

Operational improvements at this intersection will improve traffic flow through this part of Burlington Township and increase access to the recently approved 400,000 square foot retail shopping center in the vicinity of CR 541 and Bromley Blvd.

FIGURE 18


Mt. Holly Ave. & Rancocas Rd &
Fountain Ave. & 13th St.
Burlington Township
House
House
Realtor
Dentist
Church
13th Street
Fountain Ave.
Rancocas Road (CR 635)
Mount Holly Ave. (CR 541)
8'
12'
14'
12'
8'
13'
13'
25'
2'
15'
15'
33'
12'
11'
3'
12'
12'
12'
12'
Delaware Valley Regional Planning Commission
June 1997
SCHEMATIC NOT TO SCALE

13. MT. HOLLY AVE (CR 541). RANCOCAS RD (CR 635), FOUNTAIN AVE AND 13TH ST

Burlington Township

Existing Conditions:

Located approximately three quarters of a mile south of US 130, this signalized intersection has five legs. Mt. Holly Avenue is the primary facility through this intersection and runs in a generally east-west direction. The eastern leg carries two 12-foot lanes in each direction. The approach consists of a shared through and left turn lane and a shared through and right turn lane. The approach on the western leg consists of a shared through and left turn lane and a shared through and right turn lane. The departure lane on this leg is 25 feet wide and can accept traffic from the two through lanes on the westbound approach. This departure lane tapers down to a 12-foot lane approximately 200 feet from the intersection. The cross section of Mt. Holly Avenue in this area consists of a 12-foot lane and an eight-foot shoulder in each direction plus a 14-foot two-way center left turn lane.

Fountain Avenue makes up the northern leg of the intersection and consists of a 15-foot lane in each direction. 13th Street, the southern leg, is offset from Fountain Avenue by about 30 feet. This is a one-way street which only carries traffic away from the intersection. Rancocas Road, the fifth leg of the intersection, carries one lane in each direction. An 11-foot approach lane and adjacent three-foot shoulder accommodate all movements from this approach into this intersection.

The adjacent land use is a mix of residential (south side) commercial (realtor and dentist on the north side of Mt. Holly Avenue) and a church between Mt. Holly Avenue and Rancocas Road. The posted speed limit is 35 MPH on Rancocas Road, Fountain Avenue and the western side of Mt Holly Avenue. On the eastern side of Mt. Holly Avenue the speed limit is posted at 40 MPH.

Operations at this intersection are controlled by a three-phased signal. Included in this timing, the eastbound Mt. Holly Avenue approach is provided a three-second advance with a protected left turn movement.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 19,200 vehicles on CR 541 between Third Street and Second Street.

Identified Problems:

- This intersection is characterized by significant peak period congestion.
- The signal timing and physical layout of the intersection appear to be major contributors to the congested conditions.
- Westbound traffic through the intersection must merge together into one lane as Mt. Holly Avenue transitions from two lanes in each direction to one travel-lane in each direction.
- The green time assigned to Rancocas Road appears to be insufficient as only six or seven vehicles were observed typically getting through the intersection. The queues on this approach frequently didn't clear during the cycle.
- The three-second advance for eastbound Mt. Holly Avenue may be insufficient to adequately serve the left turn movement.

Potential Improvement Scenarios:

Short Term

- This location has been included in Phase I of a project to install a closed loop traffic signal system along CR 541 and several other signalized intersections in the vicinity. As part of the project, the signal timing at this intersection will be optimized and interconnected with surrounding signalized intersections.

The traffic signal system project is intended to improve traffic flow along CR 541. This is an important consideration for the area of Burlington Township around the I-295 and NJ Turnpike interchanges. The increase in retail development, including the recently approved 400,000 square foot retail shopping center in the vicinity of CR 541 and Bromley Blvd, require that the traffic conditions along CR 541 continue to be monitored and evaluated.

Long Term

- Due to the development pressures occuring along CR 541 and CR 635, a study is recommended to address the potential impacts of increased traffic on this intersection.

14. SALEM ROAD: FROM MILL STREET TO US 130

Burlington City

Existing Conditions:

Salem Road runs in a generally east-west direction from VanSciver Parkway in Willingboro to US 130 in Burlington City. Through Burlington Township, this road consists of a 12-foot lane in each direction plus a six-foot shoulder eastbound and a nine-foot shoulder westbound. This configuration changes somewhat in Burlington City where the road is stripped for a 12-foot travel lane in the eastbound direction and a 17-foot travel lane in the westbound direction. No shoulders are provided in this section. Another significant change is that the speed limit drops from 35 MPH in the Township to 25 MPH in the City. On-street parking is not permitted in the Burlington City section. The adjacent land use in this section of Salem Road is residential. Much of the traffic on this street in the AM peak period is pass through traffic headed towards US 130 or the Burlington Bristol Bridge.

A traffic count conducted by DVRPC in 1992 indicated an AADT of approximately 14,000 vehicles on Salem Road just west of Sunset Road.

Identified Problems:

- The primary problem in this section of Salem Road is speeding and traffic congestion at the approach to US 130.
- Westbound traffic coming through Burlington Township typically continues at the same rate of speed through Burlington City although the posted speed limit has been lowered.
- The geometrics of the road in Burlington City contribute to this problem. Traffic is afforded a 17-foot travel lane in the westbound direction with an unimpeded flow all the way to US 130.
- The design of the road in the westbound direction is conducive to a speed higher than 25 MPH.
- Indications are, that a significant portion of this traffic is generated in Willingboro and uses Salem Road because there are no better ways to access US 130 or the bridge.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A3 (US 130 Highway Commercial Area and Route 413 Link to the Burlington Bristol Bridge - Burlington City and Burlington Townships).

The long term scenario is expected to have the greater impact on the traffic problems along Salem Road. The improvements needed to implement this scenario require much more coordination and lead time than the short term scenario. Therefore, it is important to initiate actions immediately which can move this long range improvement towards completion. In the interim, there are several strategies which can be implemented quickly which would have a positive impact on mitigating this traffic problem.

Short Term

There are several traffic calming strategies which would help slow the flow of traffic through this section.

- Reconfigure the cross section of Salem Road to provide a 12-foot lane in each direction, a three-foot shoulder eastbound and a two-foot shoulder in the westbound direction. This configuration retains the existing 29-foot cartway. The reduction in width of the westbound travel lane will lead to reduced speeds.
- Another strategy involves the installation of an oversized speed limit sign (R2-1) in the vicinity of the transition area which will make people more aware of the speed change.
- Evaluate the possibility of adding stop signs (R1-1) on Salem Road at one of the intersecting streets; possibly Glenwood Avenue, Fernwood Avenue or Elm Avenue.
- The most effective method, but one that requires a considerable effort from Burlington City is a random period of local enforcement.
- Burlington City, Burlington Township and the Burlington County Bridge Commission should work together with NJ DOT to restrict access to Salem Road from Keim Blvd. and redirect that traffic to a signalized Campus Drive (see problem location # 15).

Long Term

- An improvement that will be discussed in a subsequent section (see problem location # 15) that should help the magnitude of this problem by reducing traffic on Salem Road, is construction of a Campus Drive extension from Sunset Road to Salem Road. With this extension, traffic coming from Burlington and Willingboro Townships can access US 130 via Campus Drive.
- A traffic signal and median break on US 130 at Campus Drive along with eliminating access to Salem Road from Keim Blvd. should produce a significant reduction in traffic on eastbound Salem Road.
- A signal at Campus Drive would require the removal of the signal located approximately 1,100 feet north of Campus Drive and relocating the associated jughandles to Campus Drive.

FIGURE 19

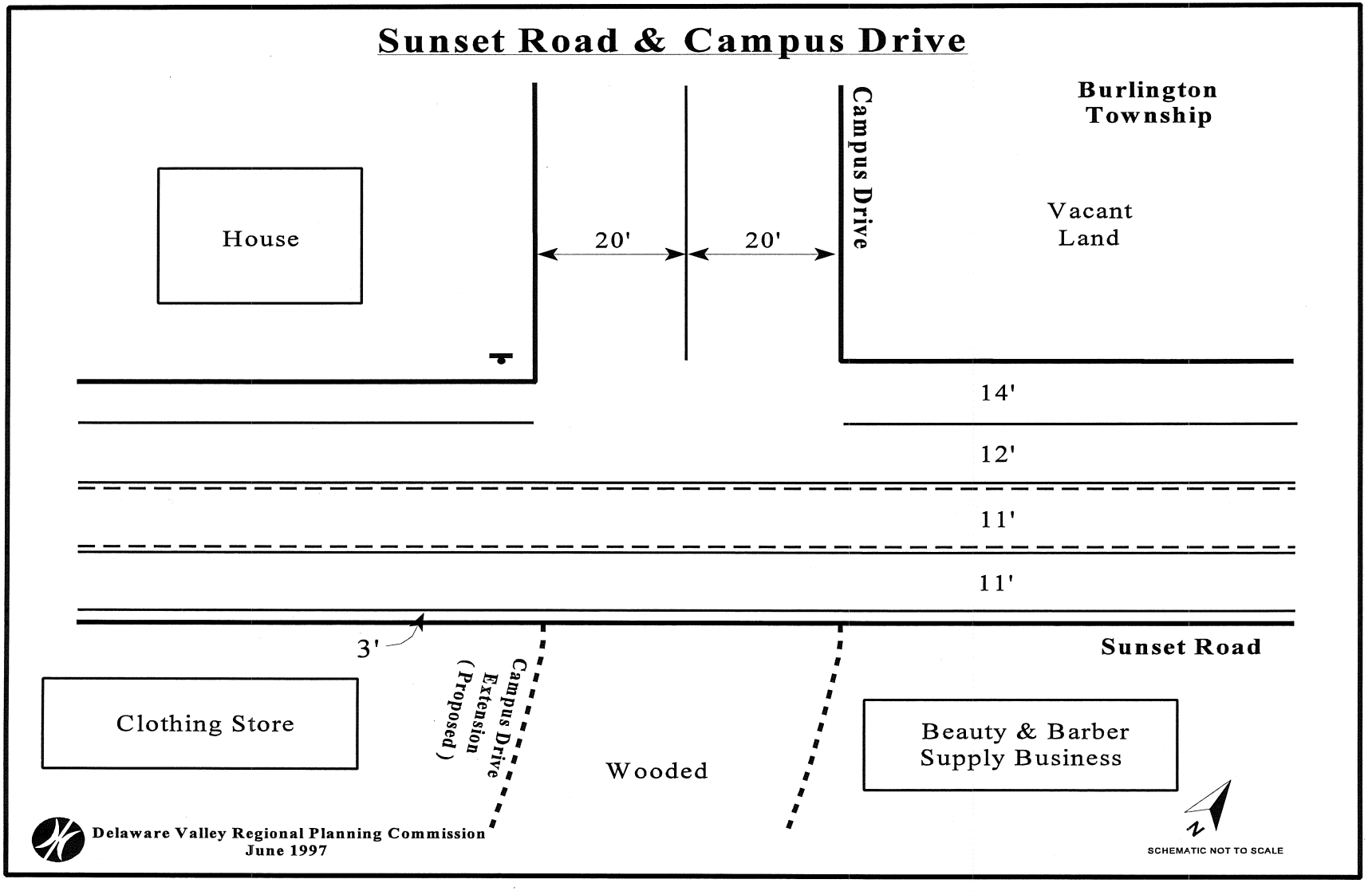
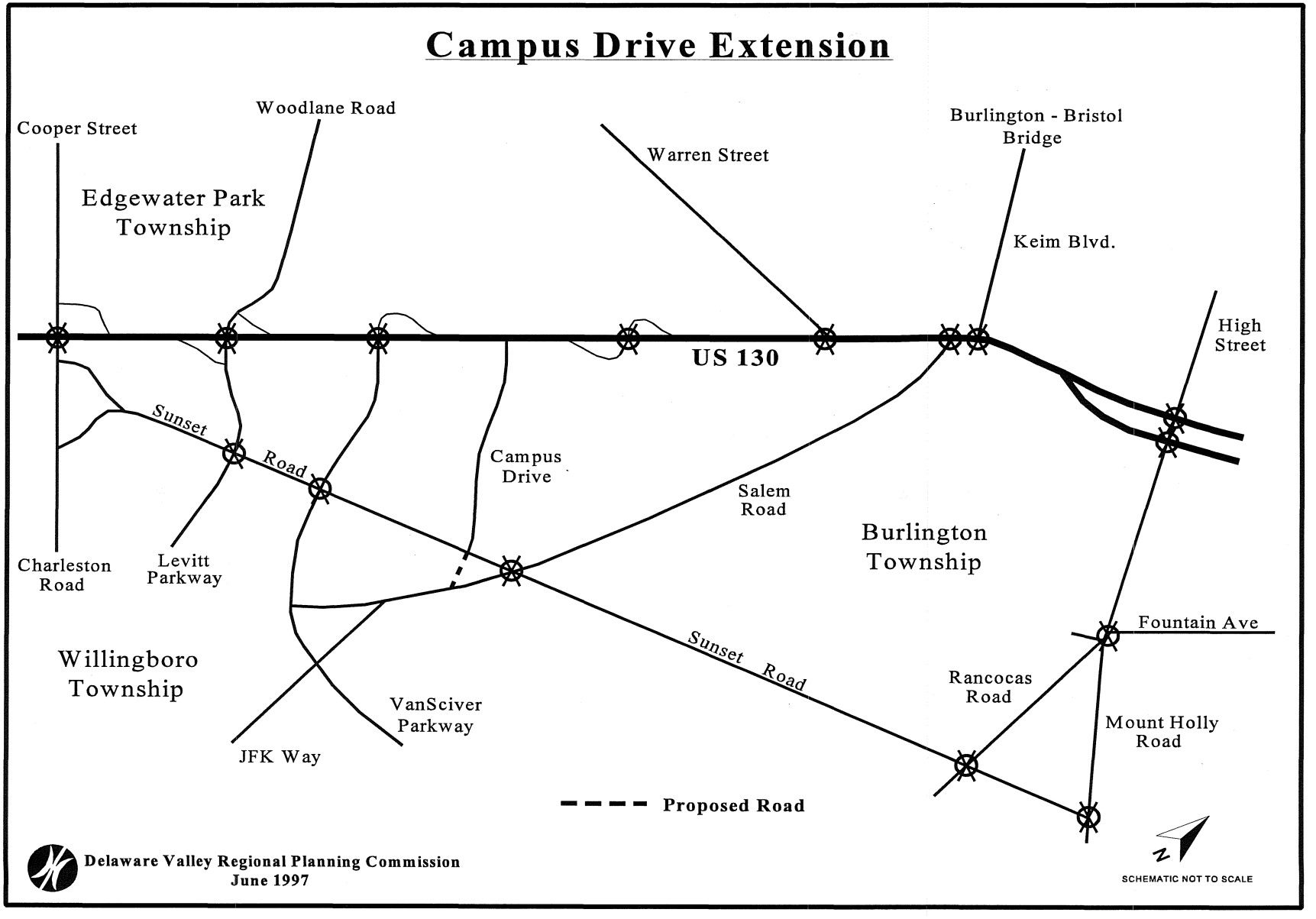

Sunset Road & Campus Drive
Burlington Township
Campus Drive
House
20'
20'
Vacant Land
14'
12'
11'
11'
3'
Sunset Road
Clothing Store
Campus Drive Extension (Proposed)
Wooded
Beauty & Barber Supply Business
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

FIGURE 20


Campus Drive Extension
Cooper Street
Woodlane Road
Warren Street
Burlington - Bristol Bridge
Edgewater Park Township
Keim Blvd.
High Street
US 130
Sunset Road
Campus Drive
Salem Road
Burlington Township
Charleston Road
Levitt Parkway
Willingboro Township
Fountain Ave
Sunset Road
Rancocas Road
VanSciver Parkway
Mount Holly Road
JFK Way
Proposed Road
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

15. CAMPUS DRIVE: FROM US 130 TO SUNSET ROAD (CR 634)

Burlington Township

Existing Conditions:

This is a three leg intersection with Campus Drive forming the stem of a T intersection with Sunset Road. Sunset Road is one lane in each direction with an 11-foot center left turn lane. The eastbound travel lane is 11 feet wide and the westbound lane width is 12 feet. There is a 3-foot wide shoulder present on the south side on Sunset and a 14-foot wide shoulder on the north side. The 14-foot shoulder also acts as a right turn lane for motorists using Campus Drive. Campus Drive serves as access to Burlington Business Campus, an industrial park, and provides access to northbound US 130. Campus Drive is 40 feet wide (a 20-foot approach lane and 20-foot departure lane) and is controlled at Sunset Road by a stop sign. A private home occupies the northwest corner of the intersection and the northeast corner is vacant land. Directly across from Campus Drive is a patch of wooded undeveloped land which sits between two commercial businesses. The speed limit on Sunset Road is posted at 45 mph.

Discussions by county and municipal officials have centered around the possibility of improving the attractiveness of Campus Drive as an access to US 130. This would also lessen the impacts on Salem Road.

A traffic count conducted by DVRPC in 1992 indicated an AADT of approximately 13,800 vehicles on Sunset Road between VanSciver Parkway and Salem Road.

Identified Problems:

- Specific problems at this intersection are related to the difficulty for vehicles on Campus Drive to find appropriate gaps in the traffic on Sunset Road which would allow a safe left turn in the PM peak period.
- The larger problem relates not specifically to this intersection although this intersection is critical in the development of a potential overall improvement. The problem is how to take advantage of the opportunity that Campus Drive presents in improving access to US 130 for residents and businesses located in Burlington and Willingboro Townships while at the same time lessening the traffic impacts to the residents along Salem Road in Burlington City.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A3 (US 130 Highway Commercial Area and Route 413 Link to the Burlington Bristol Bridge - Burlington City and Burlington Townships).

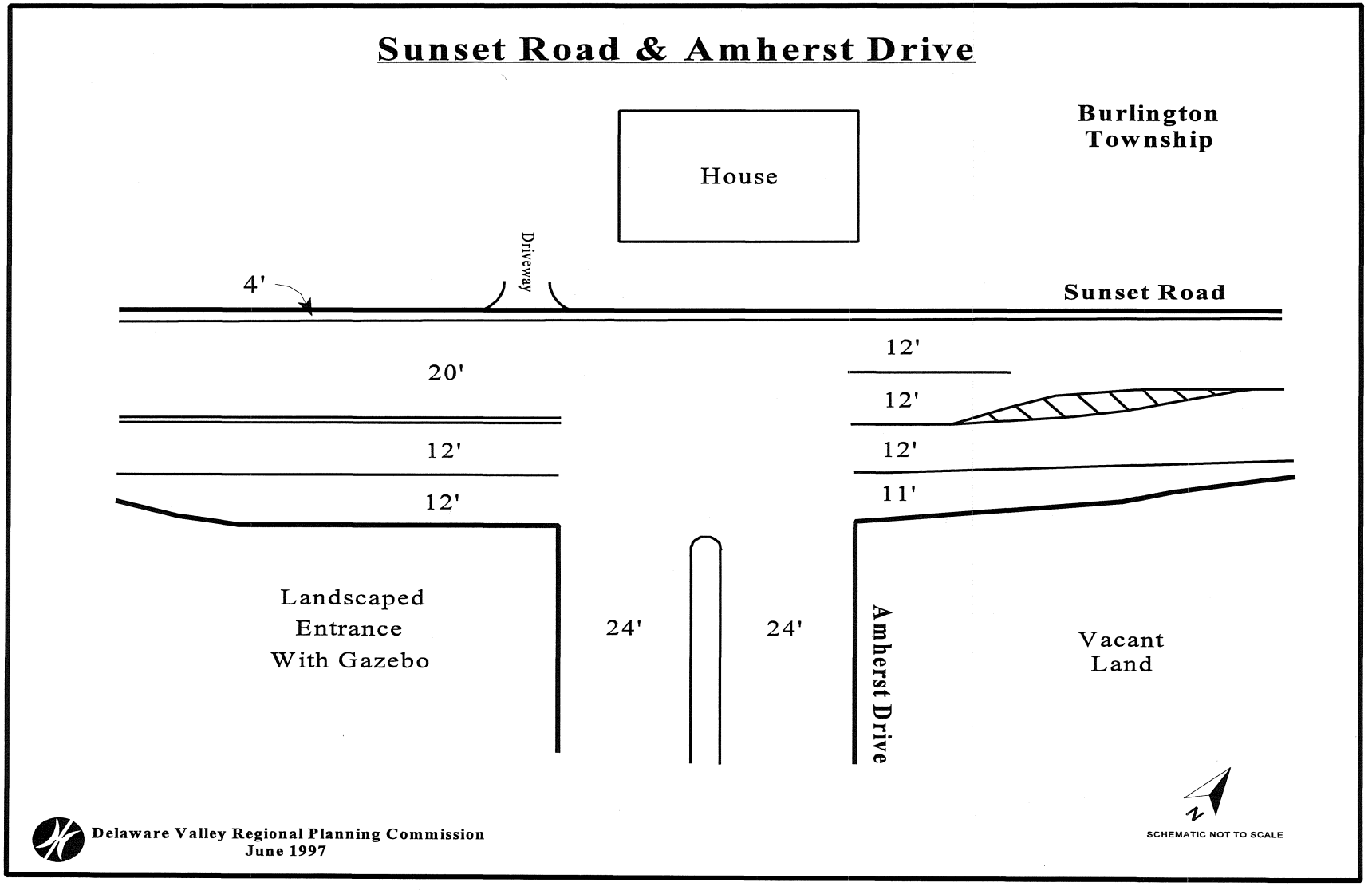
Short Term

- Burlington Township and Burlington County should work together to preserve the undeveloped property on Sunset Road so that it can be used for the Campus Drive Extension.
- Burlington Township should incorporate the concept of an extension of Campus Drive into the circulation element of their Master Plan.
- Willingboro and Burlington Townships should coordinate with the hospital and medical offices expansion relating to their impacts on the highway system and the highway improvements impacts on the hospital.

Long Term

- The Township should work with NJ DOT to relocate the existing signal and jughandles on US 130 just north of Campus Drive to Campus Drive.
- Burlington City, Burlington County and the Burlington County Bridge Commission should work together with NJ DOT to restrict access to Salem Road from Keim Blvd. and redirect that traffic to a signalized Campus Drive.
- Signalize the intersection of Campus Drive and Sunset Road and construct an extension of Campus Drive through the available vacant land to Salem Road.
- Investigate the need to signalize the new intersection created by Campus Drive Extension and Salem Road.
- Coordinate the signal timing of any new signals with the existing signal at Sunset Road and Salem Road.
- Add a left turn lane on westbound Salem Road at the Campus Drive extension.
- These improvements, combined with, the relocation of the existing traffic signal and jughandles on US 130 north of Campus Drive would 1) create a new, more effective access to US 130 for the residents and businesses of Burlington and Willingboro Townships and 2) improve the attractiveness of the Burlington Business Campus by allowing all movements to and from US 130 at its Campus Drive entrance.
- This improvement would also provide the following benefits to Salem Road: 1) it would reduce the number of vehicles using Salem Road through Burlington Township and Burlington City to reach US 130 and the Burlington Bristol Bridge, 2) create gaps on Salem Road so vehicles can enter more easily from Willow Road/Adams Street, and 3) reduce congestion at the intersection of Sunset and Salem Roads.

FIGURE 21


Sunset Road & Amherst Drive
Burlington Township
House
Driveway
4'
Sunset Road
20'
12'
12'
12'
12'
12'
11'
Landscaped Entrance With Gazebo
24'
24'
Amherst Drive
Vacant Land
Delaware Valley Regional Planning Commission
June 1997
SCHEMATIC NOT TO SCALE

16. SUNSET ROAD (CR 634) AND AMHERST DRIVE
Burlington Township

Existing Conditions:

This intersection is a three leg intersection with Amherst being the entrance to the Sunset Ridge development. Sunset Road is one lane in each direction plus shoulders. The eastern leg of Sunset Road consists of two 12-foot lanes and a 12-foot wide left turn lane for movements onto Amherst Drive. The shoulder on the south side of Sunset has been widened to 11 feet as part of the development construction. The northern shoulder is one-foot wide with pavement markings present. The western leg of Sunset Road has a 20-foot departure lane and 12-foot approach lane as well as a 12-foot wide shoulder/right turn lane for movements onto Amherst Drive. A four-foot shoulder is present on the north side of the road. Amherst Drive is one lane by direction, with a 24-foot approach lane and a 24-foot lane traveling away from the intersection. The lanes are separated by a grass median with a development sign and landscaping.

The Sunset Ridge development is expected to contain approximately 500 single family homes when completed. This development has one other access point. it is located on Salem Road approximately 700 feet from Sunset Road. The operation of Amherst Drive is controlled by a stop sign. The southeast corner of the intersection is vacant land and the southwest corner is a landscaped development entrance with a gazebo. A private home with driveway access to Sunset Road is located across from Amherst Drive. The speed limit on Sunset Road is posted at 45 mph.

Identified Problems:

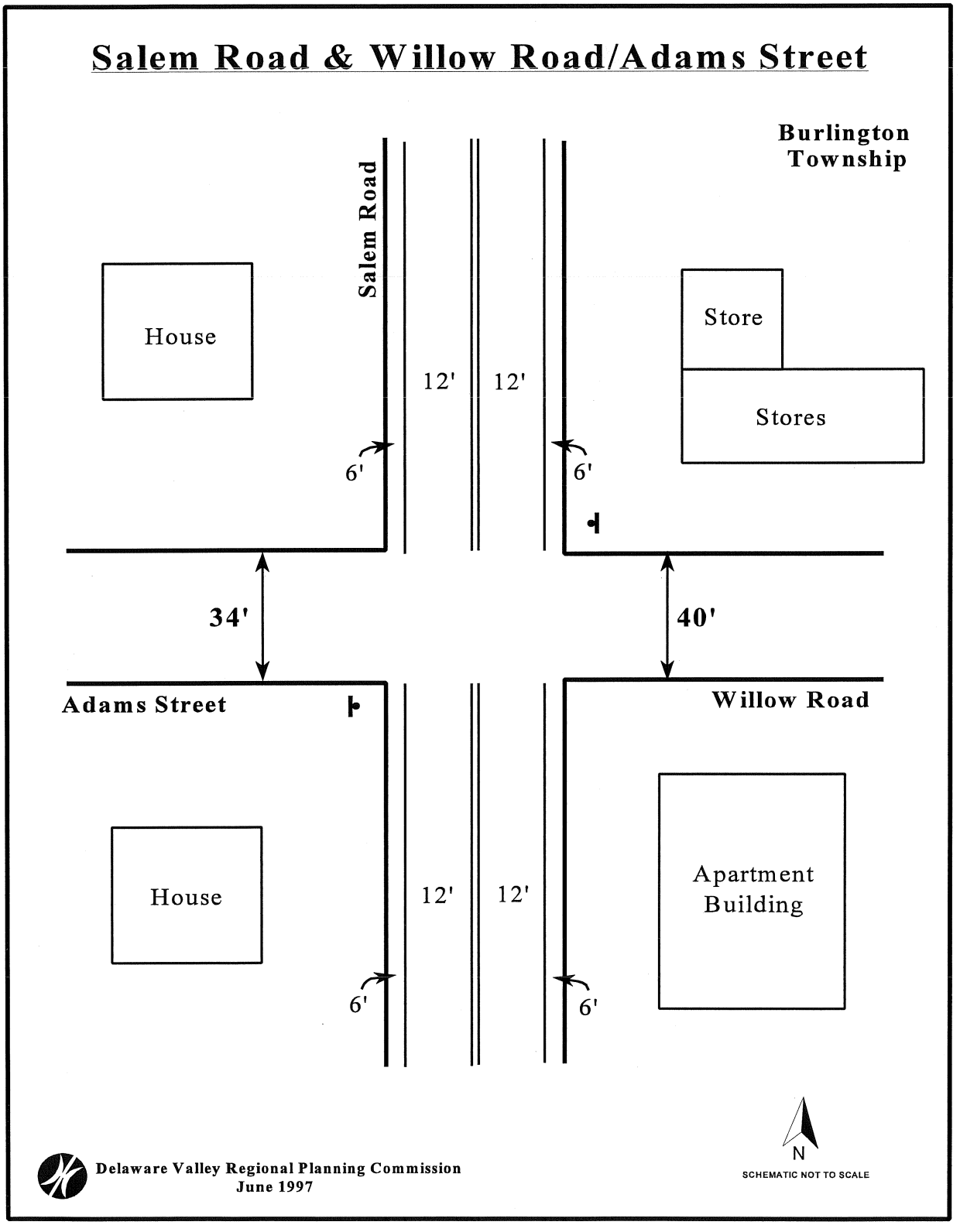
- Increased traffic on Amherst Drive as a result of the build out of the Sunset Ridge development is a concern as well as the potential impact from the additional traffic on this intersection from other developments in this area
- Turns into and out of Amherst Drive during peak periods are already difficult and will worsen with increased development.

Potential Improvement Scenarios:

Short Term

- With the increasing development pressures along Sunset Road, an improvement plan for this facility should be developed which identifies a coordinated and comprehensive set of strategies.
- Conduct a traffic signal warrant analysis to determine if this location warrants installation of a traffic signal with full development build out factored into the analysis.
- Increase the shoulder width on the north side of Sunset Road.

FIGURE 22


Salem Road & Willow Road/Adams Street
Burlington Township
Salem Road
House
Store
Stores
12'
12'
6'
6'
34'
40'
Adams Street
Willow Road
House
Apartment Building
12'
12'
6'
6'
N
SCHEMATIC NOT TO SCALE
Delaware Valley Regional Planning Commission
June 1997

17. SALEM ROAD (CR 633) AND WILLOW ROAD/ADAMS STREET

Burlington Township

Existing Conditions:

This intersection operates as a four leg intersection with the western leg (Adams Street) being a no-outlet street. Operations at the intersection are controlled by stop signs on Willow Road and Adams Street. Salem Road is 36 feet wide with one 12-foot lane in each direction and 6-foot shoulders. This road serves as a major connection for traffic to travel from Burlington and Willingboro Townships to US 130 north and the Burlington-Bristol Bridge. Willow Street is 40 feet wide with one approach and one departure lane. On-street parking is allowed on the south side of the street. This road serves a small residential community and cannot be used as a through route for traffic. Adams Street is 34 feet wide with one approach and one departure lane. As mentioned before, there is a no-outlet sign posted at the corner. There are houses on the southwest and northwest corners of the intersection. A local business and convenience store occupy the northeast corner with driveway access on Willow Street and Salem Road. An apartment building occupies the southeast corner of the intersection with driveway access on Salem Road.

Identified Problems:

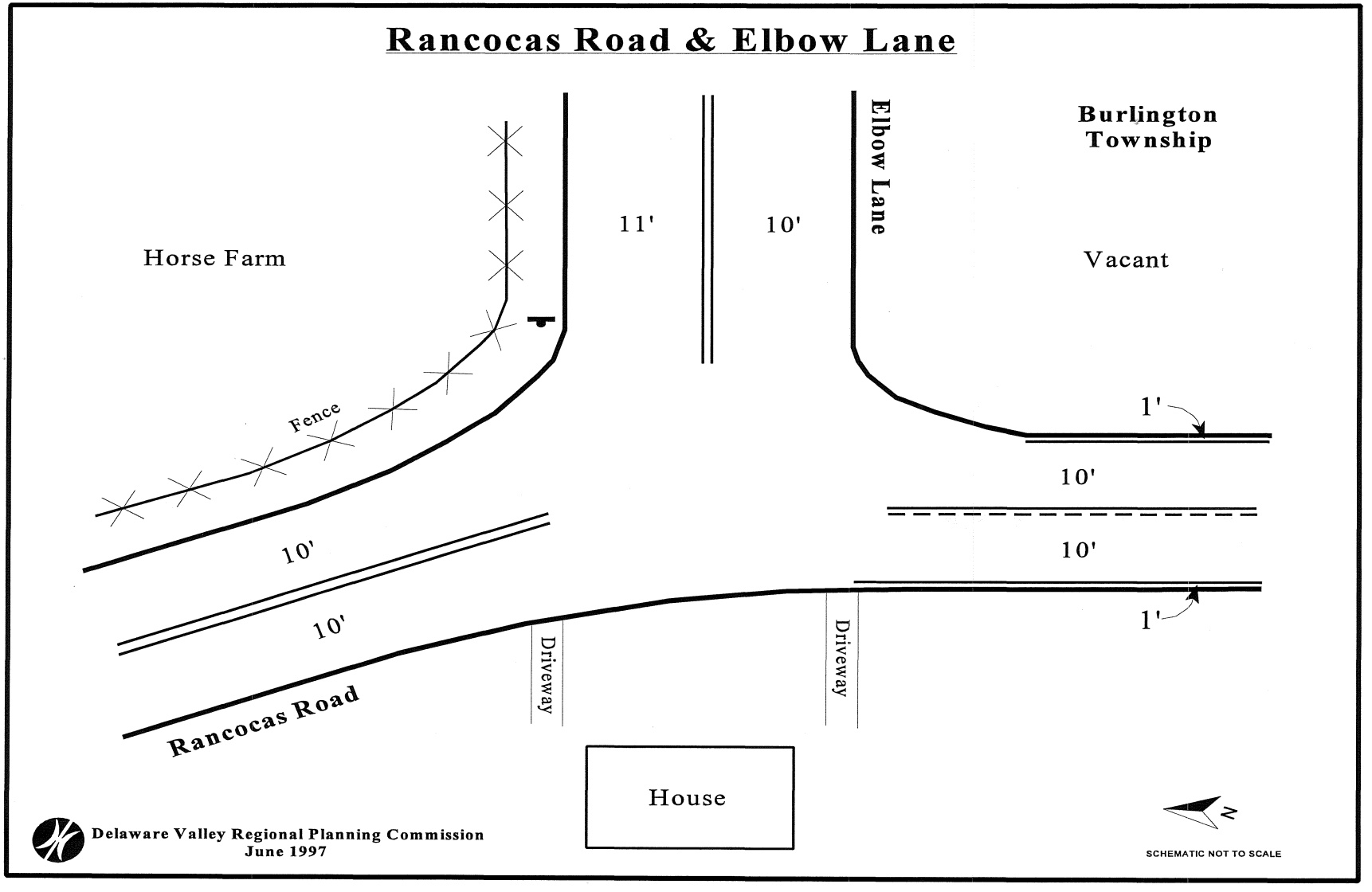
- The problem identified with this intersection was the extended period of time required to enter onto Salem Road from the cross streets. Sight distance, speed, and amount of traffic all contribute to the problem.

Potential Improvement Scenarios:

Short Term

- Even though the traffic on Willow Road/Adams Street is minimal based on the area served by this facility, a recommendation is made to conduct a traffic signal warrant analysis to determine if this location warrants installation of a signal.
- Construction of an extension of Campus Drive across Sunset Road into Salem Road (see problem location # 15) should significantly reduce traffic on Salem Road and hence eliminate the need for additional improvements to this intersection.

FIGURE 23


Rancocas Road & Elbow Lane
Horse Farm
Fence
11'
10'
Elbow Lane
Burlington Township
Vacant
1'
10'
10'
10'
1'
Driveway
Driveway
Rancocas Road
House
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

18. RANCOCAS ROAD (CR 635) AND ELBOW LANE

Burlington Township

Existing Conditions:

Traffic control at this three-leg intersection consists of a stop sign on Elbow Lane. This leg of the intersection provides an 11-foot approach lane and a 10-foot departure lane. There are no shoulders available on Elbow Lane.

Both the northern and southern legs of Rancocas Road provide a 10-foot lane in each direction. The southern leg also provides a one-foot shoulder in each direction. There are no shoulders available on the northern leg of Rancocas Road. There is a house located on Rancocas Road directly opposite Elbow Lane. This property has two driveways which lead directly into the intersection. There is a horse farm located in the northeast quadrant and the southeast quadrant has recently been cleared. This parcel in now for sale to be developed.

The posted speed limit along Rancocas Road is 45 MPH. A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 6,600 vehicles on Rancocas Road between Sunset Road and Elbow Lane.

Identified Problems:

- PM peak period congestion occurs on Elbow Lane as vehicles have difficulty entering the intersection due to heavy traffic on Rancocas Road.
- The physical layout of the intersection creates sight distance problems. This intersection is situated on a curved section of Rancocas Road.
- Vehicles entering the intersection from Elbow Lane must pull up into the intersection to be able to see down the northbound Rancocas Road approach.
- An industrial park located on Elbow Lane generates truck traffic through this intersection. Large trucks were observed having difficulty negotiating the left turn from Elbow Lane to southbound Rancocas Road.
- The pavement surface on both roads is in poor condition and standing water adjacent to the roadways indicates a drainage problem.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A6 (CR 541 and I-295 Interchange Area - Burlington Township).

Short Term

Burlington County is pursuing improvements to this location which calls for reconstructing this intersection. The following improvements should be addressed by this project:

- Cut back the northeast and southeast corners to increase the turning radius and improve the sight distance.
- Provide a northbound right turn lane on Rancocas Road.
- Resurface Elbow Lane and Rancocas Road in the vicinity of the intersection.
- Conduct a traffic signal warrant analysis to determine if this location warrants installation of a signal.

19. WARREN STREET (CR 543) CONRAIL UNDERPASS

Edgewater Park

Existing Conditions:

Warren Street carries one lane in each direction and connects downtown Beverly to US 130 near Burlington City. Approximately half-way between these end points, Warren Street passes under the Conrail tracks. These two facilities cross at a very acute angle which requires negotiating two sharp turns to pass under the tracks.

Warning signs, typically used where it is deemed necessary to warn traffic of existing or potentially hazardous conditions, are posted at both entrances to the underpass. A reverse turn sign (W1-3), intended for use to mark two turns in opposite directions that are separated by a tangent of less than 600 feet, is posted with a supplemental speed advisory plate (W13-1) of 10 MPH on each side of the underpass. The underpass also has a low clearance sign (W12-2) posted for 13 feet 7 inches on both approaches to the underpass.

In the northbound direction, the low clearance sign is located north of Woodlane Road and in the southbound direction, it is located south of Park Avenue. Arrow signs are mounted on the walls inside the tunnel to direct traffic through the turns. The center lines and edge lines have been worn away inside the tunnel. There is one street light on either side of the tunnel and there was some debris observed in the underpass. A 10 MPH warning sign with a flashing beacon is mounted on a mast arm and hangs out over the roadway just prior to the underpass in both directions.

Outside the tunnel, the speed limit is posted for 40 MPH. The remains of an old paved road or driveway were observed along the south side of Warren Street heading towards the back of the adjacent lumber yard.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 9,100 vehicles on Warren Street between the underpass and US 130.

Identified Problems:

- The primary problem is the reduction in speed required to safely negotiate these curves and the potential safety problems created by those who don't slow down enough.
- The lane markings and wall mounted arrows are not very visible.
- The 13' 7" low Clearance sign may be posted too close to the underpass.

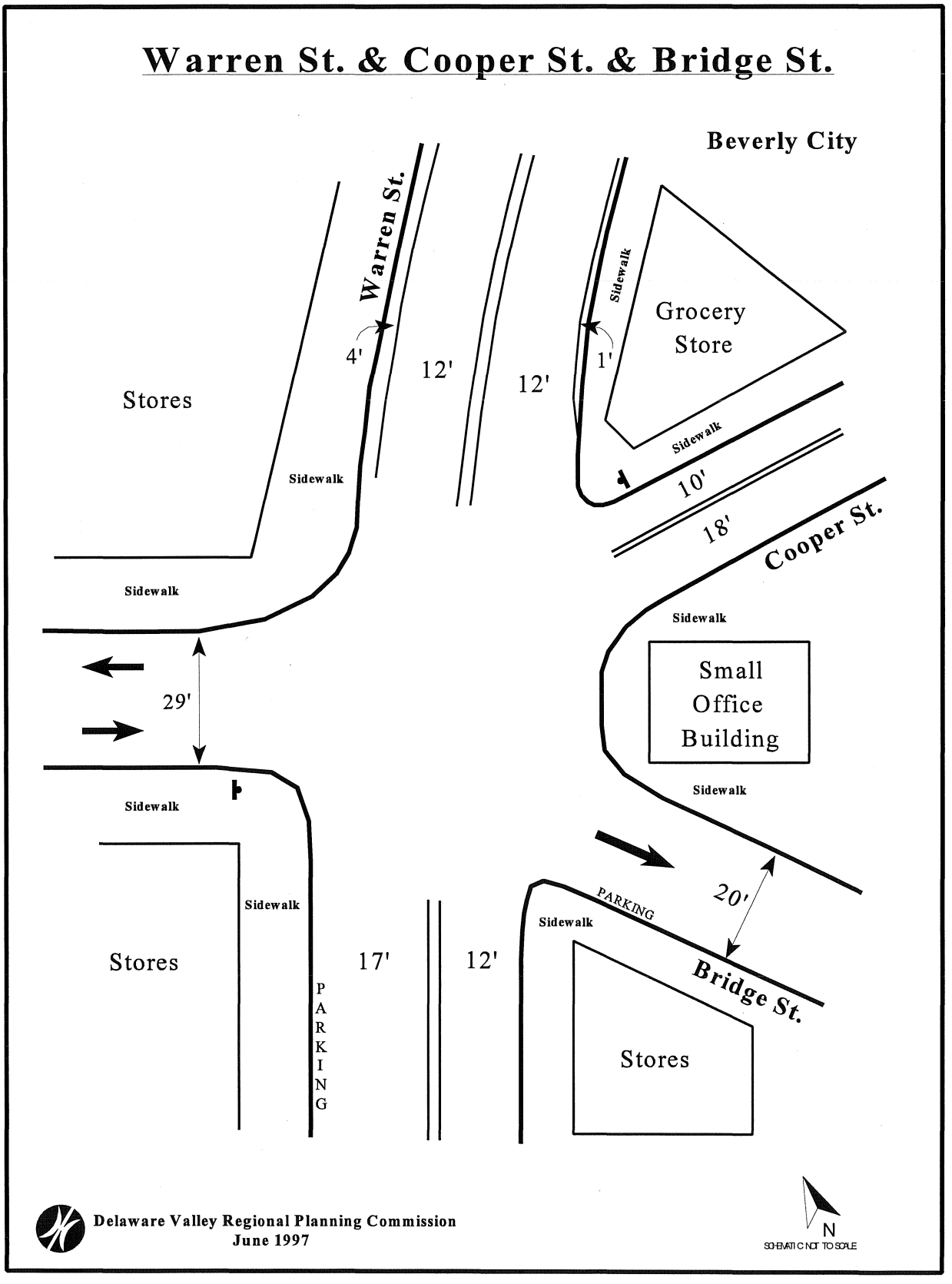
- There appears to be a problem with debris in the underpass.
- The lighting is insufficient and the underpass has some dark areas at night.
- There is no pedestrian access available.
- Graffiti on the stone walls creates an eyesore.

Potential Improvement Scenarios:

Short Term

- Upgrade all signing in and prior to the underpass. This includes replacing the arrow signs with chevron signs (W1-8) mounted on the walls, reduce speed ahead signs (R2-5) on Warren Street and relocating the advance low clearance signs on both approaches. The local street network in the vicinity of the underpass does not provide an adequate bypass for large vehicles. Therefore, low clearance signs should be posted near US 130 and near Cooper Street to intercept and divert truck traffic before it gets into the area of the underpass.
- Repaint the pavement edge lines to help delineate the travel lane.
- Install reflectorized raised pavement markers on the center lines to increase the visibility and to serve as a positioning guide.
- Add additional street lights and lighting in the underpass.
- Clear debris from the storm sewer inlets.
- Remove the graffiti and coat the walls with an anti-graffiti protective coating.

FIGURE 24


Warren St. & Cooper St. & Bridge St.
Beverly City
Warren St.
Stores
4'
12'
12'
Sidewalk
Grocery Store
1'
Sidewalk
Sidewalk
10'
18'
Cooper St.
Sidewalk
Sidewalk
Small Office Building
29'
Sidewalk
Sidewalk
Sidewalk
Stores
17'
12'
PARKING
PARKING
Sidewalk
20'
Bridge St.
Stores
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

20. WARREN STREET (CR 543) AND COOPER STREET (CR 630) AND BRIDGE STREET

Beverly City

Existing Conditions:

This five-leg intersection is situated in the center of Beverly City's downtown area. Traffic operations are controlled by stop signs on Cooper Street. The eastern leg of Cooper Street consists of a 10-foot approach lane and an eighteen-foot departure lane. On-street parking is permitted on the departure lane. This leg of Cooper Street connects Warren Street to US 130. The adjacent land use along this leg of Cooper Street is primarily residential with commercial uses at the intersection. The posted speed limit is 25 MPH. The western leg of Cooper Street is 29 feet wide curb to curb. There are no pavement markings to delineate the lanes. The adjacent land use is primarily residential with some mixed commercial. This leg provides access to a recreational area along the Delaware River. On-street parking is permitted on this leg.

Warren Street serves as the main north-south thoroughfare through Beverly City. The adjacent land uses in the vicinity of the intersection are primarily commercial establishments and the buildings are situated relatively close to the roadway. On-street parking is permitted along the southbound side of the street. The northern leg consists of a 12-foot lane in each direction plus a four-foot shoulder in the southbound direction and a one-foot shoulder northbound. The speed limit is posted at 35 MPH in the northbound direction. The southern leg carries a 12 foot lane into the intersection and a 17-foot lane away from the intersection. The speed limit is posted at 30 MPH in the southbound direction.

Bridge Street is a local street which operates as a one-way street carrying traffic away from the intersection. This street is 20 feet wide and allows on-street parking along the right hand curb. This street is not a through road and serves only a few residential blocks within Beverly City.

New Jersey Transit is evaluating the potential for light rail transit service on the Conrail line which runs generally parallel to US 130 from Camden to Trenton. This evaluation includes examining the potential for locating a stop along the line in the vicinity of where the rail line crosses Cooper Street in Beverly. This location is approximately 0.3 miles from Warren Street and could have an impact on the traffic conditions at this intersection.

Identified Problems:

- This intersection is situated on a curved section of Warren Street.

- This curved alignment and the proximity of the adjacent buildings to the roadway contribute to restricted sight distance at the intersection.
- Vehicles approaching the intersection from westbound Cooper Street must pull up into the intersection to get a clear sight line down Warren Street.
- The four-foot shoulder on the northern leg of Warren Street is not sufficient to accommodate on-street parking and parked vehicles encroach onto the travel lane.

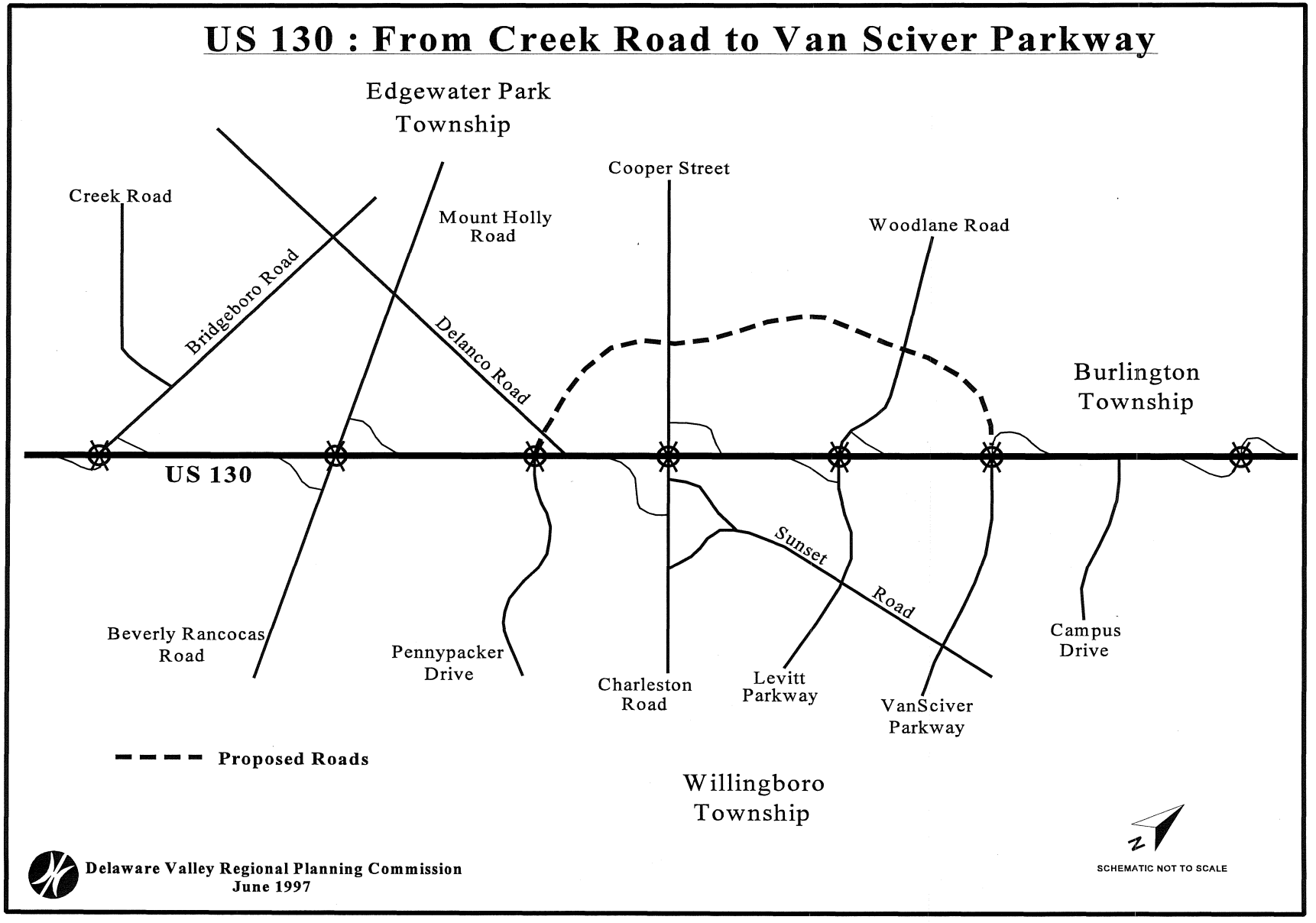
Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area B2 (Waterfront And Business District - Beverly City).

Short Term

- Conduct a traffic signal warrant analysis at this location taking into account any potential increase in traffic which may be generated by the potential transit stop on the light rail transit system.
- Eliminate a potentially hazardous situation by prohibiting on-street parking in the substandard shoulder on the southbound Warren Street approach.

FIGURE 25


US 130 : From Creek Road to Van Sciver Parkway
Edgewater Park Township
Creek Road
Bridgeboro Road
Mount Holly Road
Delanco Road
Cooper Street
Woodlane Road
Burlington Township
US 130
Sunset Road
Beverly Rancocas Road
Pennypacker Drive
Charleston Road
Levitt Parkway
VanSciver Parkway
Campus Drive
Proposed Roads
Willingboro Township
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

21. US 130: FROM CREEK ROAD TO VAN SCIVER PARKWAY MILE POST: 41.6 TO 44.1
Willingboro Township and Edgewater Park Township

Existing Conditions:

This section of US 130 is approximately 2.5 miles long and carries three travel lanes in each direction. An eight-foot outside shoulder and a two-foot inside shoulder are also available in each direction. The northbound and southbound directions are separated by a concrete median barrier. Cross traffic, left turns and U-turns are permitted only at the six signalized intersections along this stretch. Treatment for left and U-turns is through near-side jughandles. Traveling in a northbound direction, the signalized intersections and their respective distance from the previous signalized intersection are as follows: Creek Road, Beverly Rancocas Road/Mount Holly Road: 0.5 miles, Pennypacker Road: 0.5 miles, Charleston Road/Cooper Street: 0.3 miles, Levitt Parkway/Woodlane Road: 0.6 miles and Van Sciver Parkway: 0.5 miles.

The dominant land use adjacent to US 130 is strip commercial including two large shopping centers which are largely unoccupied. A few scattered parcels of undeveloped land also exist.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 48,200 vehicles on US 130 between Creek Road and the Moorestown Bridgeboro Road (CR 613) interchange.

Identified Problems:

- The primary problem along this section of US 130 is the excessive use of curb cuts to access the commercial properties. The availability of many curb cuts creates conflicts between the through traffic and turning vehicles, impeding traffic flow and creating hazardous conditions.
- Another problem associated with this section is the stop and go traffic conditions encountered because of the signalized intersections.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A7 (US 130 Highway Frontage - Edgewater Park, Delanco and Willingboro Townships).

<u>Short Term</u>

- Both Edgewater Park and Willingboro Townships need to pass a resolution requesting NJ DOT to develop a specific access management plan for this section of US 130 which seeks to eliminate unnecessary curb cuts to and from the highway. All municipalities should make an effort to eliminate subdivisions along US 130 that create small lots with individual access.

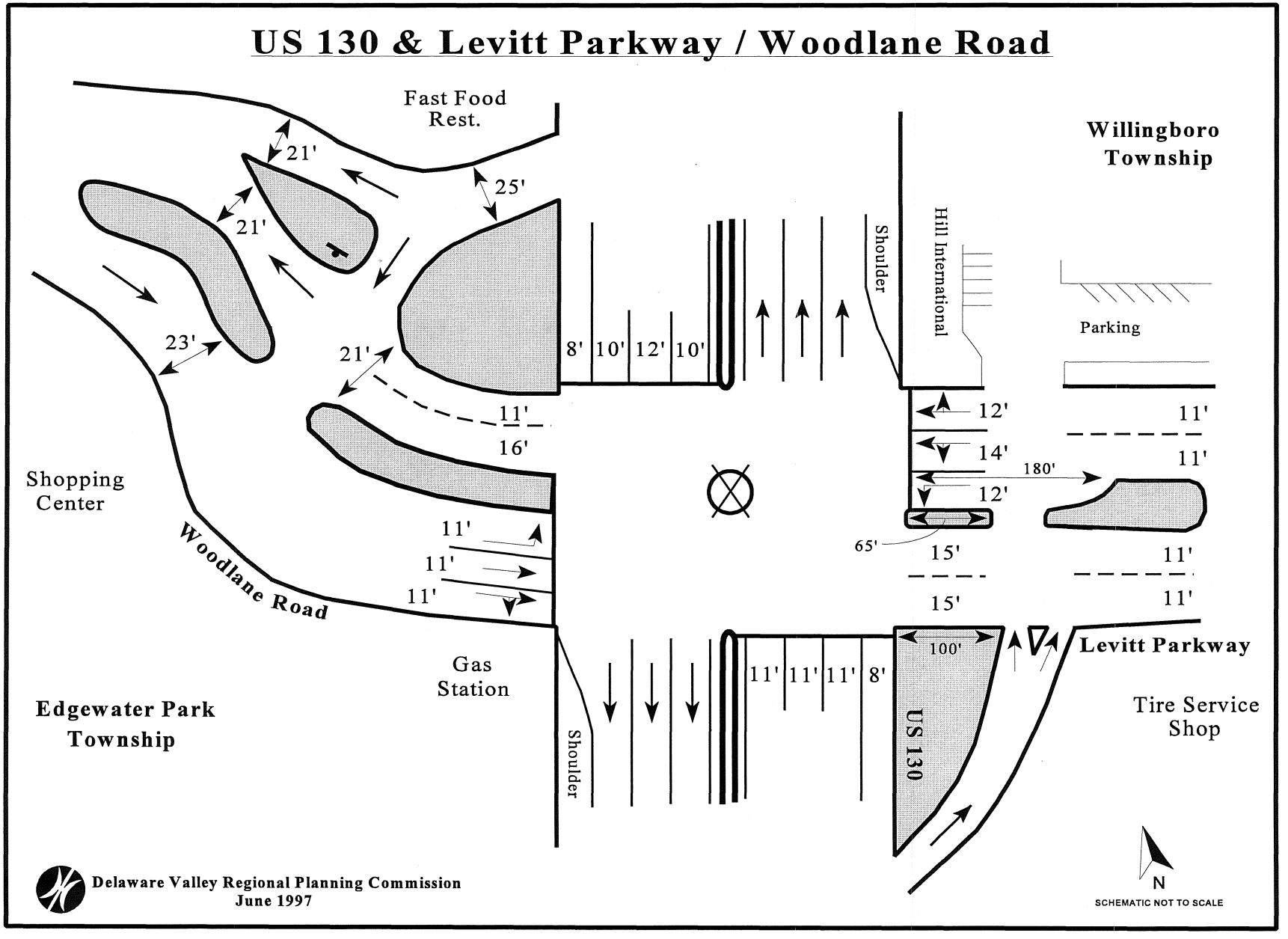
The municipalities should require common access when allowing subdivision of land along US 130.

- Excessive curb cuts currently can be found in the southbound direction between Van Sciver Parkway and Levitt Parkway. Close off unnecessary curb cuts and enhance access and mobility through shared driveways and internal circulation between adjacent properties. The strategy for achieving this objective is to encourage adjacent property owners to permit property to property movements away from the highway.
- The traffic signal timing at the six signalized intersections should be coordinated to allow for progression of traffic flow through this section.
- Edgewater Park and Willingboro should incorporate the concept of a rear access road and a frontage road that would run parallel to US 130 into the circulation element of their Master Plans.

Long Term

- Construction of a frontage road may be appropriate in the northbound direction between Charleston Road and Levitt Parkway and between Levitt Parkway and Van Sciver Parkway. Individual driveways from adjacent commercial properties should be consolidated and a frontage road should be constructed which connects adjacent properties. This technique is aimed at removing turning vehicles or queues from the through lanes. Highway conflicts can be reduced because the highway will no longer be used in traversing from one property to the next.
- Access to US 130 from cross streets should be improved with better jughandles, additional lanes and improved geometry
- Officials from Edgewater Park introduced the concept of a rear access road that would run parallel to US 130 through Edgewater Park behind some of the commercial properties that have frontage on US 130. Ideally, the road would connect VanSciver Parkway to Delanco Road and would include a new connection to US 130 and Pennypacker Drive. This new facility would serve as a local circulation road and provide access for Edgewater Park and Willingboro residents to the businesses adjacent to southbound US 130 without using the highway itself. This improvement could provide significant economic development benefits for the developed as well as undeveloped parcels located along the new circulation road. Increasing the accessability of those businesses makes them more attractive to the local market. Providing roadway frontage to undeveloped parcels that previously had no frontage increases their development potential and their property values.

FIGURE 26


US 130 & Levitt Parkway / Woodlane Road
Fast Food Rest.
21'
21'
25'
23'
21'
8' 10' 12' 10'
Shoulder
Hill International
Willingboro Township
Parking
12'
14'
12'
180'
11'
11'
11'
11'
65'
15'
15'
11'
11'
Shopping Center
Woodlane Road
11'
11'
11'
Gas Station
Edgewater Park Township
Shoulder
11' 11' 11' 8'
100'
US 130
Levitt Parkway
Tire Service Shop
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

22. US 130 AND LEVITT PARKWAY (CR 629)/WOODLANE ROAD MILE POST: 43.6

Willingboro Township and Edgewater Park Township

Existing Conditions:

US 130 carries three travel lanes plus an eight-foot outside shoulder and a two-foot inside shoulder in each direction through this intersection. The northbound and southbound directions are separated by a concrete median barrier. Treatment for left turns, right turns and U-turns is through near-side jughandles.

Levitt Parkway serves as the eastern leg of the intersection and provides three approach lanes: a 180-foot long left turn lane, a shared through and left turn lane, and a shared through and right turn lane. This leg also provides two departure lanes from the intersection. The eastbound and westbound lanes are separated by a grass median. A near side jughandle from northbound US 130 intersects Levitt Parkway approximately 105 feet east of US 130. Vehicles from the jughandle cut through an opening in the grass median to make a U-turn back onto US 130 southbound or a left turn across US 130 onto Woodlane Road. The length of the left turn lane between the median opening and the intersection is only 65 feet. If the left turn lane has more than four vehicles queued up waiting for the signal to change, it effectively blocks the median opening and prevents additional vehicles from exiting the jughandle. An automotive repair establishment is located outside the jughandle with access onto Levitt Parkway. An office building is situated on the northeast corner and has access only onto Levitt Parkway.

Woodlane Road also carries three lanes into the intersection: a left turn lane, a through lane, and a shared through and right turn lane. The width of the approach widens out to approximately 33 feet curb to curb at the intersection from the 23-foot width in the vicinity of where the southbound nearside jughandle intersects Woodlane Road. Westbound Woodlane Road provides an 11-foot lane and a 16-foot lane to carry traffic away from the intersection. These two departure lanes taper down to a single westbound lane approximately 21 feet wide in the vicinity of the southbound jughandle. The most distinguishing feature of this western leg is its S-curve and narrowing cartway as it moves away from US 130. The southbound US 130 near side jughandle intersects Woodlane Road on this curved section. A fast food restaurant is located in the northwest quadrant outside the jughandle. There is a gas station on the southwest corner.

Traffic operations are controlled by a three-phase signal which provides distinct phases for the eastbound and westbound approaches.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 10,700 vehicles on Levitt Parkway between US 130 and Charleston Road.

Identified Problems:

- The S-curve alignment of Woodlane Road is the most problematic issue at this intersection. Vehicles crossing US 130 in the westbound direction must shift their path to the right and merge together as the two lanes become one on this curved section.
- Compounding the complexity of this location is the fact that the southbound US 130 near side jughandle intersects Woodlane Road on this curved and narrowing section.
- Traffic has trouble exiting the northbound jughandle if a queue of four or more vehicles exists in the westbound left turn lane. This queue blocks the median opening and prevents jughandle traffic from accessing the westbound lanes on Levitt Parkway.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A7 (US 130 Highway Frontage - Edgewater Park, Delanco and Willingboro Townships).

<u>Long Term</u>

- Smooth the curve on Woodlane Road by cutting into the adjacent shopping center parking lot.
- Carry the two westbound departure lanes farther away from the intersection before tapering to one lane.
- Discussions with officials from Edgewater Park indicated that there is support for reconfiguring the southbound jughandle. The suggestion that seemed most widely accepted was to look into creating a reverse jughandle around the gas station on the southwest corner and utilizing some of the fringe area of the shopping center parking lot.
- Relocate the northbound jughandle so that it intersects Levitt Parkway farther to the east. This may require encroaching on the parking lot of the adjacent auto repair business.
- Close the existing median opening on the eastbound Levitt Parkway approach and create a new one across from the relocated jughandle.

23. LEVITT PARKWAY (CR 629) AT SUNSET RD, AT CHARLESTON RD AND AT SALEM RD
Willingboro Township

Existing Conditions:

Levitt Parkway is one of the primary circulation roads through Willingboro and it provides access from the community out to US 130. This facility carries two travel lanes in each direction and is separated by a grass median. The road is enhanced at major intersections by the addition of right and left turn lanes.

Most of Levitt Parkway's major intersecting streets within Willingboro have an auxiliary turning lane on their approaches. At Levitt Parkway and Sunset Road, separate left and right turn lanes have been added on both directions of Levitt Parkway. However there is no left turn phase in the signal timing. Both Sunset Road approaches consist of a left turn lane and a shared through and right turn lane.

At its intersection with Charleston Road, the left turn lanes on Levitt Parkway are afforded a protected movement in the signal timing. The eastbound Charleston Road approach consists of a shared through and left turn lane and a right turn only lane. The westbound approach provides a separate left turn lane and a shared through and right turn lane.

The intersection of Levitt Parkway and Salem Road is a three leg intersection. Levitt Parkway carries two through lanes plus a right turn lane in the eastbound direction and carries two through lanes plus a left turn lane in the westbound direction. The Salem Road approach consists of a right turn lane and a left turn lane. Salem Road intersects Levitt Parkway on a curve.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 10,700 vehicles on Levitt Parkway in this area.

Identified Problems:

- The primary problems associated with these intersection are related to the left turn movements.
- The left turn movements from Sunset Road are not provided with a separate phase and the opposing left turn traffic occasionally obstructs the line of sight of on coming through traffic. The left turn movements from Levitt Parkway also do not have a separate phase at this

location and must cross two lanes of on coming traffic.

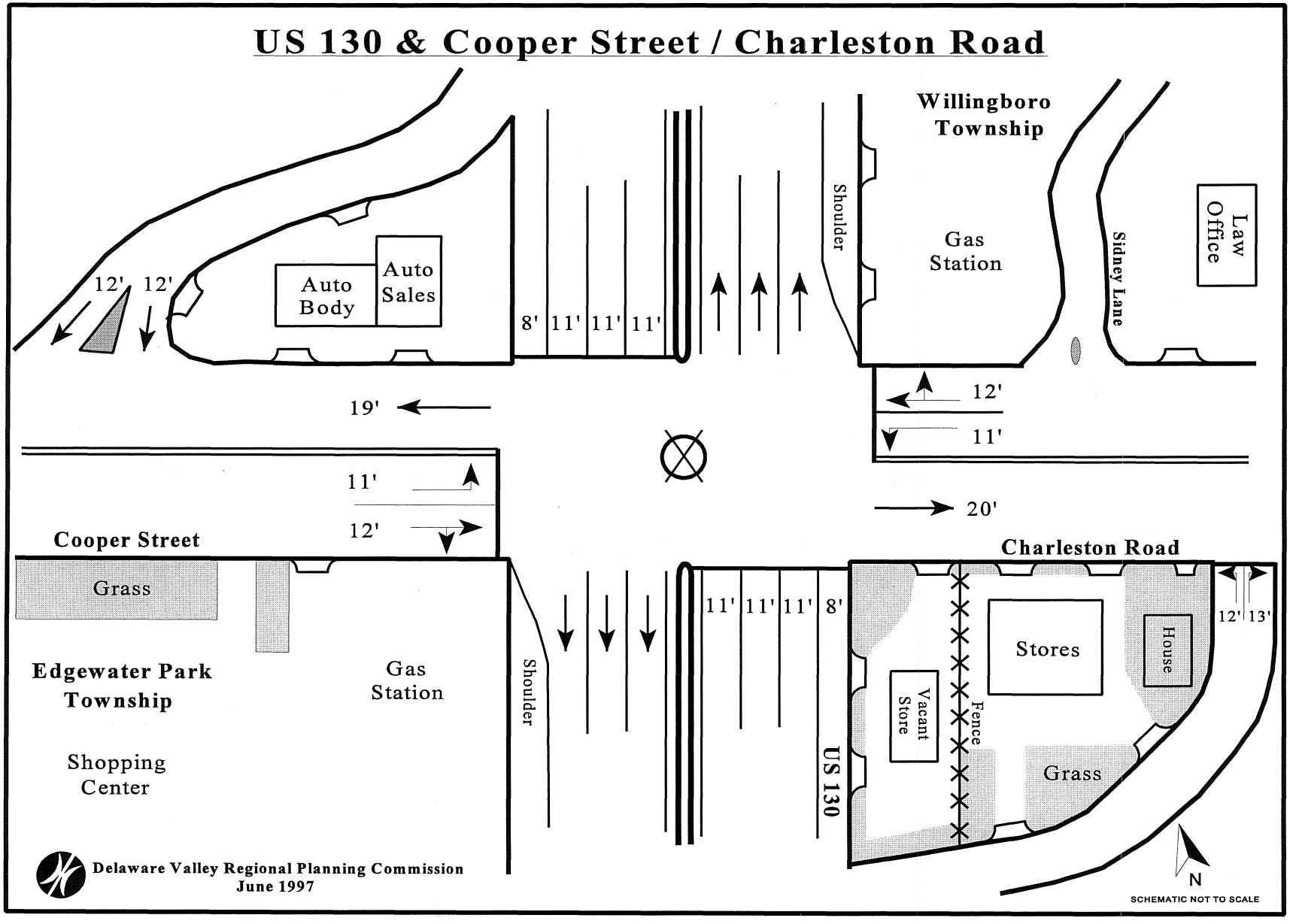
- The eastbound left turns from Charleston Road do not have a separate lane and neither direction of Charleston Road is afforded a protected phase for left turns.
- The westbound left turns from Levitt Parkway on to Salem Road do not have a separate phase and must cross two lanes of on-coming traffic. Because Levitt Parkway is in a curved alignment at this location, vehicles approaching the intersection on eastbound Levitt Parkway are obstructed from seeing the traffic signal because of the mature trees located in the median.

Potential Improvement Scenarios:

Short Term

- Improve the safety at these intersections by evaluating the appropriateness of providing separate phases for left turn movements and trimming or removing some of the trees located in the median of Levitt Parkway at Salem Road. A county bridge project in the vicinity of Levitt Parkway and Salem Road is proposed to address the sight distance problems associated with the vertical alignment and vegetation in the median.

FIGURE 27


US 130 & Cooper Street / Charleston Road
Willingboro Township
Shoulder
Gas Station
Sidney Lane
Law Office
Auto Body
Auto Sales
12'
12'
8'
11'
11'
11'
19'
12'
11'
11'
20'
Cooper Street
Grass
Edgewater Park Township
Gas Station
Shopping Center
Shoulder
Charleston Road
11'
11'
11'
8'
US 130
Vacant Store
Fence
Stores
House
Grass
12'
13'
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

24. US 130 AND COOPER STREET / CHARLESTON ROAD (CR 630) MILE POST: 43.0
Willingboro Township and Edgewater Park Township

Existing Conditions:

Traffic operations at this four-leg intersection are controlled by a three phase signal. Cooper Street and Charleston Road operate on separate phases. US 130 carries three travel lanes plus an eight-foot outside shoulder and a two-foot inside shoulder in each direction through this intersection. The northbound and southbound directions are separated by a concrete median barrier. Treatment for left turns, right turns and U-turns is through near-side jughandles.

In the northbound direction, the jughandle departs US 130, goes behind several businesses and a residence, then intersects Charleston Road approximately 380 feet east of US 130. There are two driveways from the jughandle to the parking lot of the commercial properties. The jughandle provides a 12-foot left turn lane and a 13-foot right turn lane at its intersection with Charleston Road.

On the northwest corner, there are two businesses (an auto dealer and an auto body shop) situated within the southbound jughandle. There are two driveways from the jughandle to the parking lot of the commercial properties. This jughandle intersects Cooper Street 190 feet west of US 130 and provides a 12-foot left turn lane and a 12-foot right turn lane at its intersection with Cooper Street.

Cooper Street makes up the western leg of the intersection. The approach consists of an eleven-foot left turn lane and a 12-foot shared through and right turn lane. The westbound departure lane is 19 feet wide. There are two long driveway openings along the north side of Cooper Street between US 130 and the jughandle. These driveways serve the businesses located within the jughandle.

Charleston Road makes up the eastern leg of the intersection. The approach consists of an eleven-foot left turn lane and a 12-foot shared through and right turn lane. The eastbound departure lane is 20 feet wide. There are four curb cuts along the south side of Charleston Road between US 130 and the jughandle. These curb cuts provide access to/from the businesses and residence located within the jughandle. Sidney Lane intersects the north side of Charleston Road approximately 190 feet from US 130.

There are gas stations located on the northeast and southwest corners.

Identified Problems:

- The primary problems associated with this intersection are related to the businesses located within the jughandles. Access to and from these businesses causes conflicts with other traffic. The poor internal circulation within the jughandles restricts movements and adds to the problems.
- Queues on Charleston Road create conflicts and potential safety problems for left turning traffic from Sidney lane and the adjacent gas station.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A7 (US 130 Highway Frontage - Edgewater Park, Delanco and Willingboro Townships).

Short Term

- Improve the internal circulation within the jughandles by eliminating access points and sharing driveways.
- Prohibit left turns from Sidney Lane and the adjacent gas station onto Charleston Road. Create an access to Sidney lane from the northeastern corner of the gas station. This will allow Sidney lane to function as a rear access road for the business along US 130 since the bank and shopping center already have access to both US 130 and Sidney Lane.

Long Term

- Consider reconfiguring the jughandles with the possibility of creating reverse jughandles for both directions.

25. COOPER STREET (CR 630): FROM US 130 TO GREEN STREET

Edgewater Park Township

Existing Conditions:

The section of this two-lane facility between US 130 and Green Street is approximately 0.6 miles long and is a central entrance into Edgewater Park from US 130. This road also serves as the main access between US 130 and the City of Beverly. The lane widths and cartway widths vary throughout this segment. Adjacent to the cemetery the eastbound lane is 17 feet wide and the westbound lane is 21 feet wide. The eastbound lane narrows to 11 feet and the westbound lane remains 21 feet wide in front of the apartment complex. Cooper Street carries a 19-foot lane in each direction between Blossom Street and Green Street. Signs prohibiting on-street parking are posted on both sides of the road throughout this segment. The speed limit is posted at 35 MPH.

The road is flanked by a mix of various land uses. East to west from US 130 the land uses along the north side of the road include the auto sales and auto body shop, the historic Coopertown Meeting House and Cemetery, an apartment complex and fourteen single family residences. In the same direction, the land uses along the south side of the street include a gas station, a vacant shopping center, a large undeveloped parcel, two single family residences and a strip of small commercial establishments, (bank, pharmacy, convenience store, gas station, etc.).

Within the commercial strip between Blossom Street and Green Street, the internal circulation permits access among the establishments and all of the buildings are set back an adequate distance from the road.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 7,400 vehicles in this section of Cooper Street.

Identified Problems:

- The primary problems relate to the uncontrolled access along Cooper Street in the vicinity of the commercial strip.
- Traffic volumes and turning movements along Cooper Street during the peak periods were also identified as problematic.

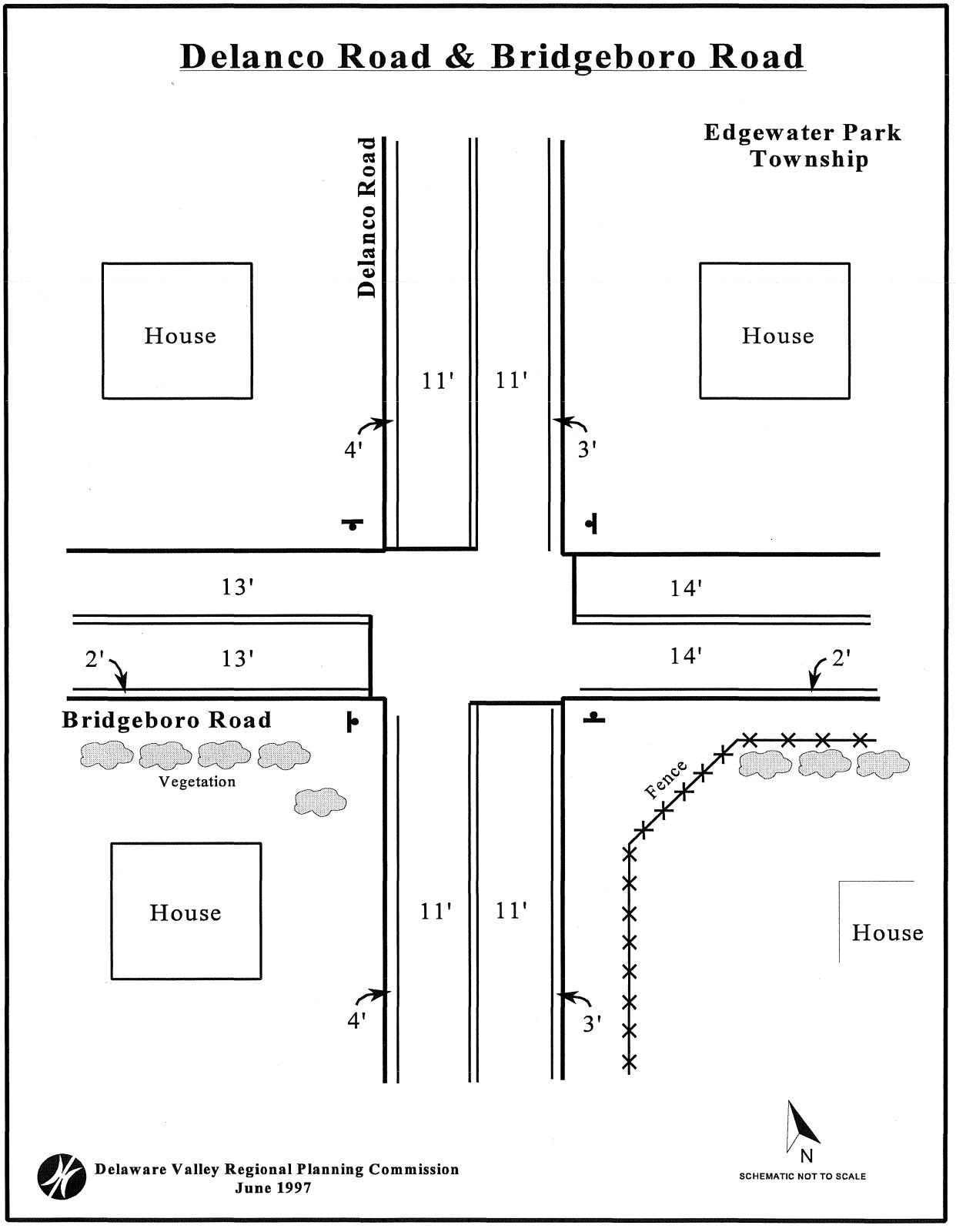
Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area B1 (Cooper Street - Edgewater Park Township and Beverly City)

Short Term

- Develop an access management plan that would consolidate and relocate the driveways in the commercial strip area. Consideration should be given to providing a sidewalk in this area to serve the significant pedestrian traffic from the adjacent residential developments.
- Reconfigure Cooper Street to provide one travel lane in each direction plus a center left turn lane from the cemetery to Green Street. This configuration would provide safer movements into and out of both the commercial and residential land uses. A 38-foot cartway currently exists for most of this segment. The segment in front of the undeveloped parcel is 32 feet wide and some minor widening would be required to keep this road at a consistent width.

FIGURE 28


Delanco Road & Bridgeboro Road
Edgewater Park Township
Delanco Road
House
House
11'
11'
4'
3'
13'
14'
2'
13'
14'
2'
Bridgeboro Road
Vegetation
Fence
House
House
11'
11'
4'
3'
N
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Delaware Valley Regional Planning Commission
June 1997

26. DELANCO ROAD (CR 624) AND BRIDGEBORO ROAD

Edgewater Park Township

Existing Conditions:

This four leg intersection is controlled by stop signs on each of the four approaches. Delanco Road has a 29-foot cartway width comprised of a 4-foot shoulder, two 11-foot travel lanes and a 3-foot shoulder. This road serves as a major connection for traffic to travel between the Delanco Industrial area and US 130. The posted speed limit on Delanco Road is 45 MPH. The eastbound approach of Bridgeboro Road is 28 feet wide, two 13-foot travel lanes and a 2-foot shoulder on the south side. The westbound approach of Bridgeboro Road is 30 feet wide with a 14-foot travel lane in each direction and a 2-foot shoulder on the south side. The posted speed limit on Bridgeboro Road is 35 MPH. There are houses with frontage property on each of the four corners of the intersection.

A traffic count conducted by DVRPC in 1995 shows that Delanco Road carries 3,600 vehicles per day between Perkins Lane and Bridgeboro Road.

Identified Problems:

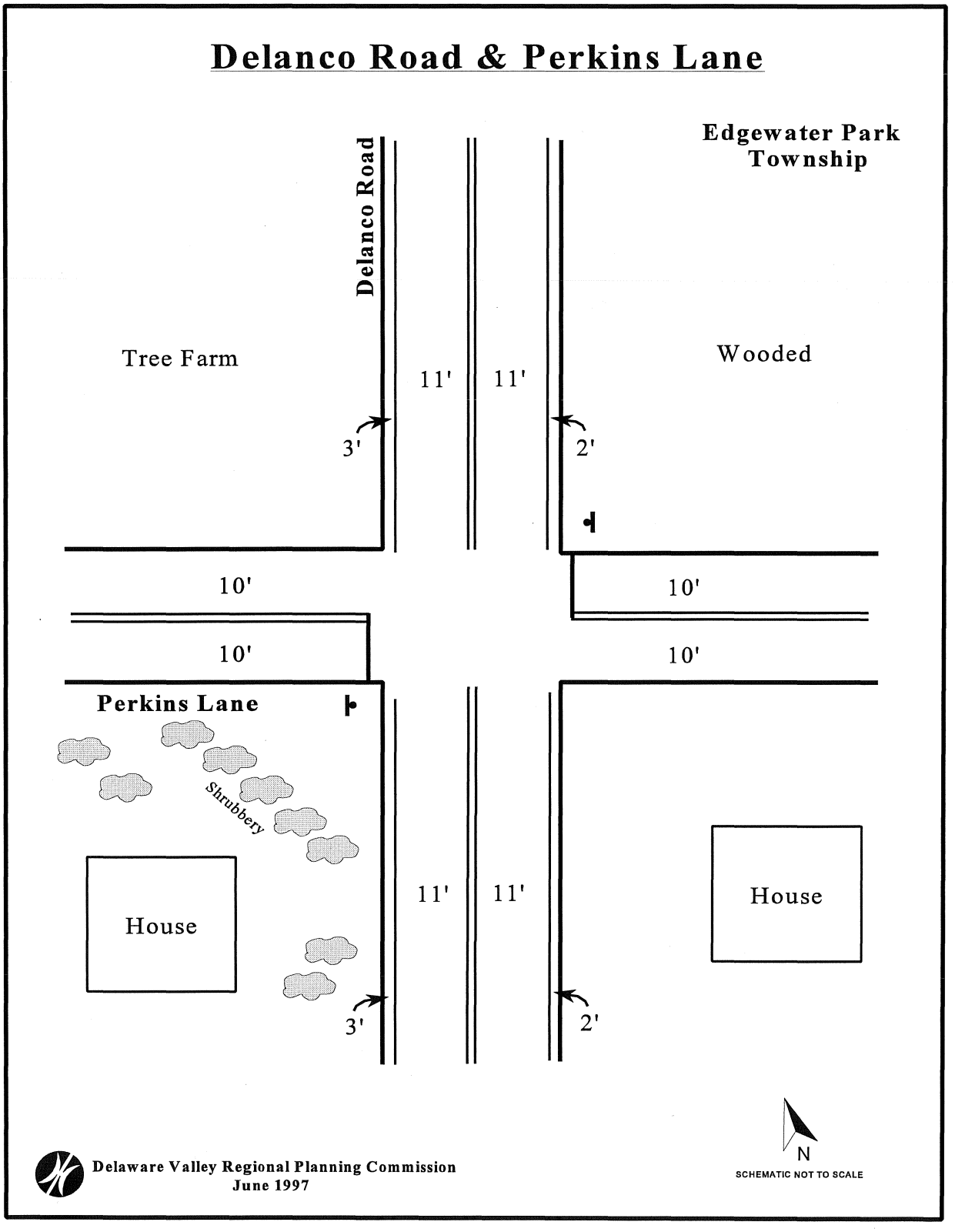
- The problem identified with this intersection was the safety factors associated with entering onto and across Delanco Road from Bridgeboro Road. Sight distance, speed, and amount of truck traffic all contribute to the problem.

Potential Improvement Scenarios:

Short Term

- Even though the traffic volumes on Delanco Road and Bridgeboro Road are minimal, the safety issues at the intersection are of concern and a recommendation is made to conduct a traffic signal warrant analysis to determine if this location warrants installation of a signal.
- Meet with the surrounding property owners to discuss the possibility of increasing the intersection sight distances by making modifications to their bordering landscaping.
- Completion of a connector road between Delanco Road and Creek Road (as discussed in project location # 29) may reduce the truck traffic on Delanco Road and provide benefits to this intersection.

FIGURE 29


Delanco Road & Perkins Lane
Edgewater Park Township
Delanco Road
Tree Farm
Wooded
11'
11'
3'
2'
10'
10'
10'
10'
Perkins Lane
Shrubbery
House
House
11'
11'
3'
2'
N
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Delaware Valley Regional Planning Commission
June 1997

27. DELANCO ROAD (CR 624) AND PERKINS LANE

Edgewater Park Township

Existing Conditions:

This intersection operates as a four leg intersection and is controlled by stop signs on each of the Perkins Lane approaches. Delanco Road has a 27-foot cartway width comprised of a 3-foot shoulder, two 11-foot travel lanes and a 2-foot shoulder. This road serves as a major connection for traffic to travel between the Delanco Industrial area and US 130. The posted speed limit on Delanco Road is 45 MPH. Perkins Lane is 20 feet wide with a 10-foot travel lane in each direction and no shoulders. The posted speed limit on Perkins Lane is 35 MPH. There are signs posted on Perkins Lane that indicated trucks over 4 tons are not permitted. There are houses on the southwest and southeast corners of the intersection. A Christmas tree farm occupies the northwest corner with driveway access on Delanco Road. The northeast corner is a wooded area.

A traffic count conducted by DVRPC in 1995 shows that Delanco Road carries 3,600 vehicles per day between Perkins Lane and Bridgeboro Road.

Identified Problems:

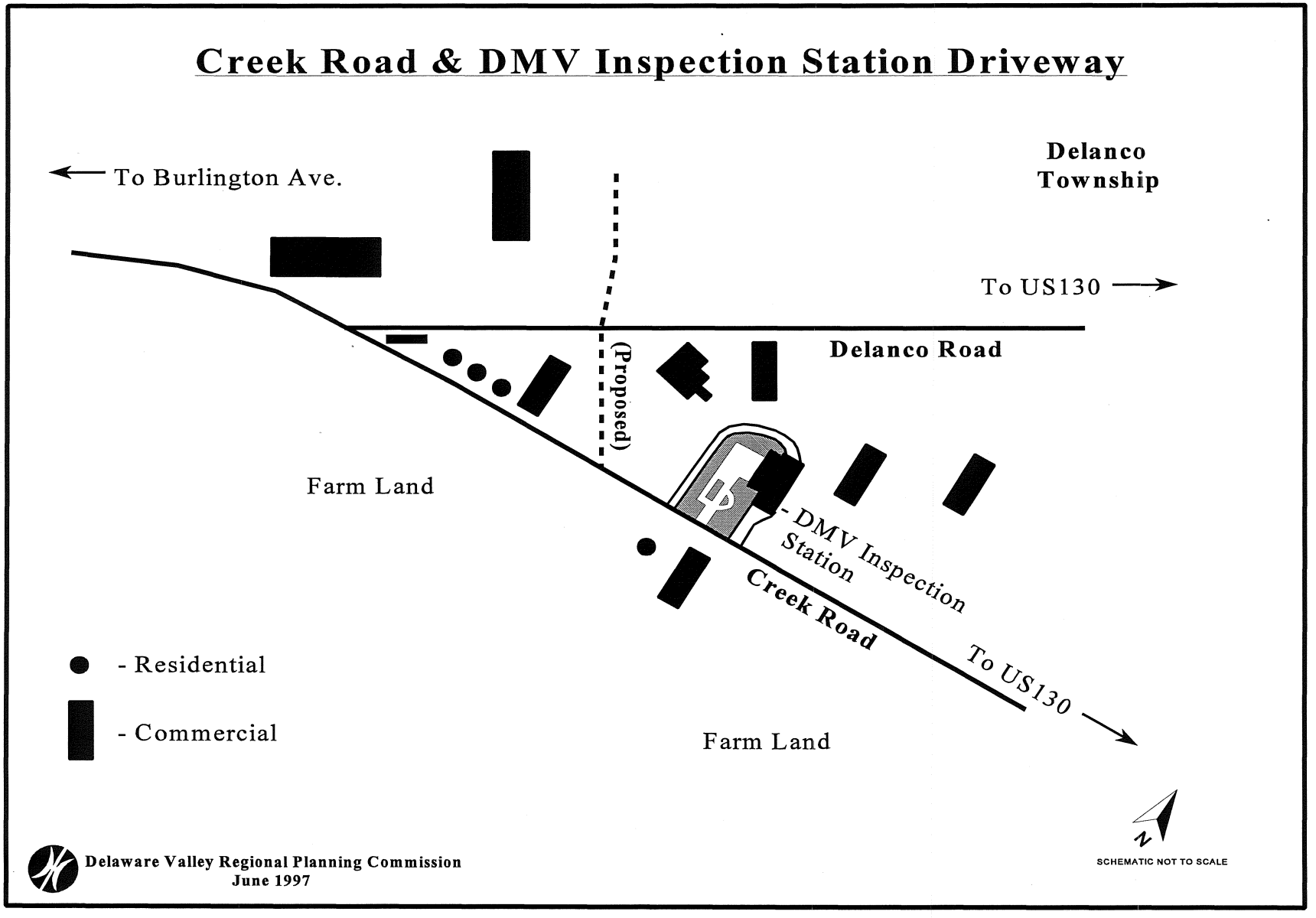
- The problem identified with this intersection was the safety factor associated with entering onto and across Delanco Road from Perkins Lane. Sight distance, speed, road configuration, and amount of truck traffic all contribute to the problem.

Potential Improvement Scenarios:

Short Term

- Even though the traffic volumes on Delanco Road and Perkins Lane are minimal, the safety issues at the intersection are of concern and a recommendation is made to conduct a traffic signal warrant analysis to determine if this location warrants installation of a signal. If a signal is not warranted, installation of four-way stop controls with oversized stop signs on Delanco and stop ahead signs should be investigated.
- Meet with the surrounding property owners to discuss the possibility of increasing the intersection sight distances by making modifications to their bordering landscape.
- Completion of a connector road between Delanco Road and Creek Road (as discussed in project location # 29) may reduce the truck traffic on Delanco Road and provide benefits to this intersection.

FIGURE 30


Creek Road & DMV Inspection Station Driveway
To Burlington Ave.
Delanco Township
To US130
Delanco Road
(Proposed)
Farm Land
DMV Inspection Station
Creek Road
To US130
- Residential
- Commercial
Farm Land
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

28. CREEK ROAD (CR 625) AND DMV INSPECTION STATION DRIVEWAY

Delanco Township

Existing Conditions:

This location experiences congestion related to the overflow conditions at the inspection station driveway. This facility was opened approximately 15 years ago and was designed to serve the population of the area at that time. Since that time, the population of the facility's market area has experienced significant growth and has overwhelmed this facility. There are three access/egress points to this facility. The western most access is one-way in and serves as the queuing area for vehicle inspections. The eastern most driveway is one-way out and serves as the exit for vehicles which have gone through the inspection process. The center driveway serves both entering and exiting traffic such as employees, re-inspection of failed vehicles and the driver testing center.

The inspection driveway can accommodate two lanes of traffic and is approximately 700 feet long. Field observations revealed that one lane can hold approximately 35 vehicles before the queue spills out onto Creek Road. Creek Road provides a 12-foot travel lane in each direction and a two-foot shoulder in the eastbound direction. Directly in front of the inspection station, the westbound shoulder has been widened to 6 feet for a distance of approximately 350 feet. Although this shoulder is substandard and vehicles encroach on the roadway and on the grass area, it is used as overflow storage from the driveway.

Conversations with the facility supervisor indicated that staffing constraints limit the facility to one lane of inspections although two are available. The supervisor indicated that, on average, his staff can process one vehicle in about two minutes, although a school bus can take considerably longer. The demand for services, and hence the resulting queues, fluctuate throughout the month. The last four days of the month are the heaviest and queues have been observed extending along Creek Road for approximately 1,700 feet during this time period.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 3,000 vehicles per day in this section of Creek Road

Identified Problems:

- When demand for vehicle inspections is heavy, traffic queues up on the driveway and spills out onto the westbound shoulder of Creek Road.

- Vehicles queued up on this shoulder frequently encroach on the Creek Road westbound travel lane and create conflicts with vehicles traveling on Creek Road.
- Additional conflicts can occur with the vehicles exiting from the facility. The vehicles parked along the shoulder create sight distance problems for the exiting vehicles.
- Drivers in the queue frequently turn their engines off or become distracted and large gaps form in the queue.
- Although there are two stacking lanes available, only one is used because there is only one inspection lane in operation.

Potential Improvement Scenarios:

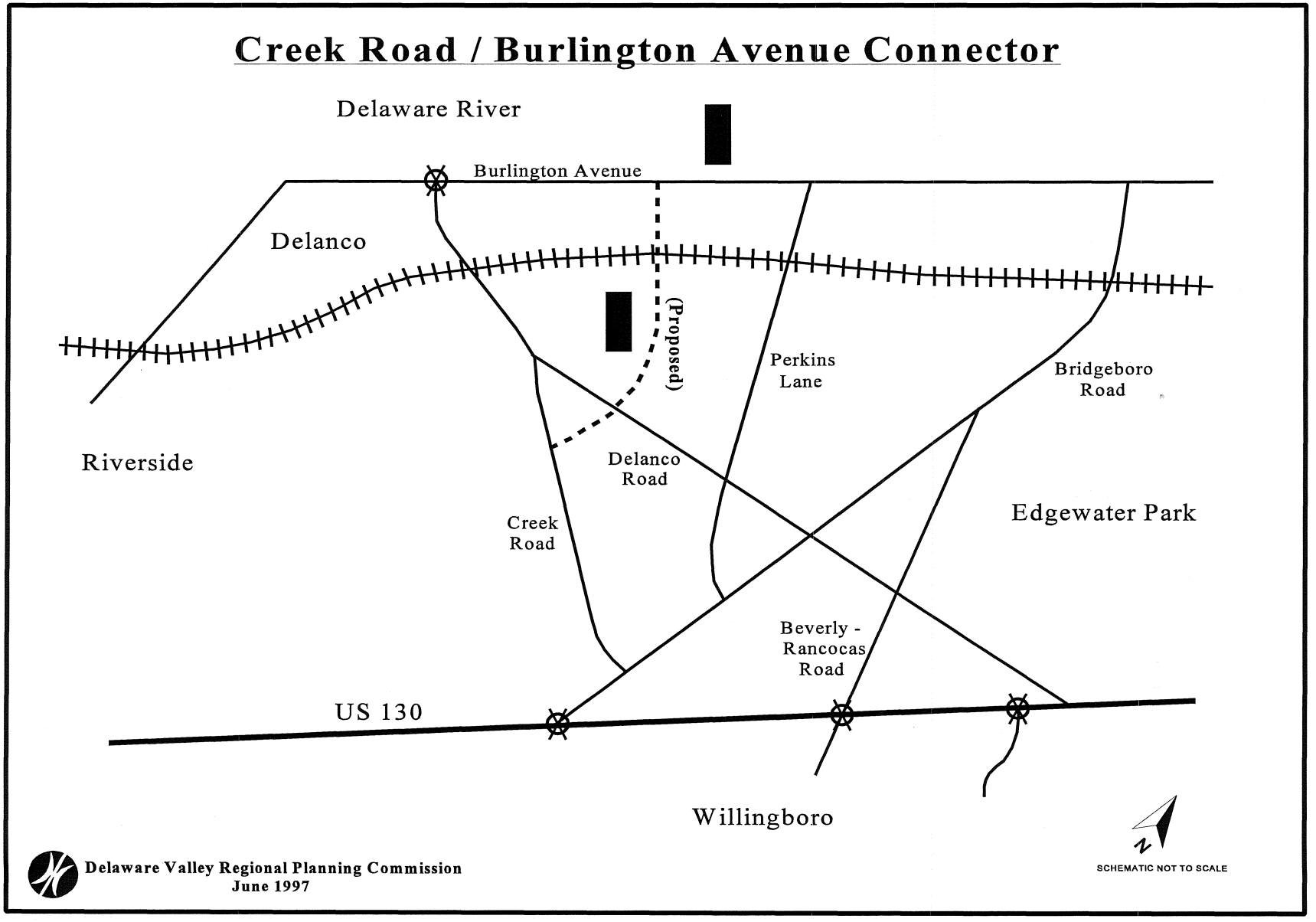
Short Term

- Utilize the existing capacity of the driveway by permitting vehicles to line up in both stacking lanes and take them on an alternating basis into the inspection area.
- Install signage along the driveway and along Creek Road to remind drivers to eliminate the gaps and keep the queue tight.

Long Term

- Increase the width of the westbound shoulder to 12 feet from the DMV inspection entrance to a point approximately 900 feet east of the driveway.
- Investigate the possibility of increasing the staffing contingent at this facility to permit utilization of both inspection lanes.
- Investigate the possibility of expanding this facility to provide additional inspection lanes in order to better serve the growing population of this area.

FIGURE 31


Creek Road / Burlington Avenue Connector
Delaware River
Burlington Avenue
Delanco
(Proposed)
Perkins Lane
Bridgeboro Road
Riverside
Delanco Road
Creek Road
Edgewater Park
Beverly - Rancocas Road
US 130
Willingboro
Delaware Valley Regional Planning Commission
June 1997
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29. CREEK ROAD (CR 625) /BURLINGTON AVENUE (CR 543) CONNECTOR

Delanco Township

Existing Conditions:

Creek Road, Coopertown Road and Burlington Avenue are all two lane facilities that serve as the primary routes to carry traffic into and out of Delanco Township. The land uses along Burlington Avenue are primarily residential, however, in the northern end of the township a large undeveloped tract is adjacent to a large warehousing facility. 320 residential units have been proposed to be constructed on this undeveloped tract. North of the warehouse facility, the residential land uses re-emerge. Trucks to or from this facility must pass through the residential areas to get to US 130 or out of the township.

The surrounding land uses along Creek Road are mostly light industrial types with scattered residential and agricultural land. Creek Road intersects Coopertown Road at a very sharp obtuse angle which makes some of the turning movements very difficult for trucks. Coopertown Road has similar land uses as Creek Road, however as it nears Burlington Avenue residential properties dominate. Creek Road and Coopertown Road experience noticeable truck traffic from businesses located along them. The portion of Coopertown Road that goes into Edgewater Park is predominately residential with scattered undeveloped areas.

Identified Problems:

- Truck traffic generated by the light industrial uses is forced to mix with the residential areas to get out of the township or to get to US 130.
- The angle at which Coopertown Road intersects Creek Road makes left turns onto Creek Road difficult for trucks. This tight turn forces truckers to avoid the Creek Road route to US 130.
- The truck traffic on Coopertown Road contributes to the problems associated with the Perkins Lane/Delanco Road and Bridgeboro Road/Delanco Road intersections (see problem locations # 26 and #27).

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area B3 (Burlington Avenue - Delanco Township).

Short Term

- Install signage along Creek and Coopertown Roads to encourage trucks to use Creek Road to reach US 130.

- DelancoTownship should incorporate the concept of a connector road from Creek Road to Burlington Street into the circulation element of their Master Plan.

Long Term

- In order to reduce the truck traffic through the residential sections of Delanco Township and to improve the movement from Coopertown Road onto Creek Road, township officials suggested the construction of a new connector road from Creek Road across Coopertown Road and into Burlington Avenue. The link between Creek Road and Coopertown Road potentially could be constructed across an undeveloped parcel and intersect Creek Road approximately 1,600 feet back from the existing Creek Road/Coopertown Road intersection. This proposed connector would be located between two existing industrial properties and would form a T-intersection at Creek Road. The new road would cross Coopertown Road, run adjacent to an industrial property, cross the rail line and intersect Burlington Avenue at a T-intersection just south of a small stream. This connection would reduce truck traffic on Coopertown Road and Burlington Avenue. The road and intersections should be constructed with sufficient width to accommodate truck traffic and their turning movements. This improvement could provide significant economic development benefits for the developed as well as undeveloped parcels located along the new connector road. Increasing the accessability of those businesses makes them more attractive to the local market. Providing roadway frontage to undeveloped parcels that previously had no frontage increases their development potential and their property values.

30. BURLINGTON AVENUE (CR 543) AND WILLOW STREET

Delanco Township

Existing Conditions:

Burlington Avenue carries one travel lane in each direction in the vicinity of this intersection and experiences a significant curve at this location. This area of Delanco Township is characterized by tree lined streets through residential development. These two streets form a three-leg intersection with the Burlington Avenue legs forming an obtuse angle. Willow Street is a one-way street into the intersection. A speed limit sign is posted for 30 MPH on Burlington Avenue near Vine Street for traffic headed towards Riverside. Another 30 MPH sign is posted near Buttonwood Street for traffic headed towards Beverly.

A sign (W1-1), warning of the curve, is posted near Buttonwood Street with an advisory speed plate (W13-1) of 10 MPH. In the northbound direction, another warning sign for the curve (W1-1) has 15 MPH advisory speed plate (W13-1). Reflectorized pavement markers have been installed on the centerline through the curve. Four chevron alignment signs (W1-8) are posted for southbound traffic to provide additional emphasis and guidance to the change in the horizontal alignment of Burlington Avenue. There is a street light at the intersection which is partially obstructed by a large adjacent tree.

Identified Problems:

- Even with the warning devices, vehicle speeds are still higher than those posted.
- The limited number of street lights and the local vegetation reduce nighttime visibility.
- Northbound traffic occasionally misses the turn and winds up heading the wrong way on the one-way street (Willow Street).

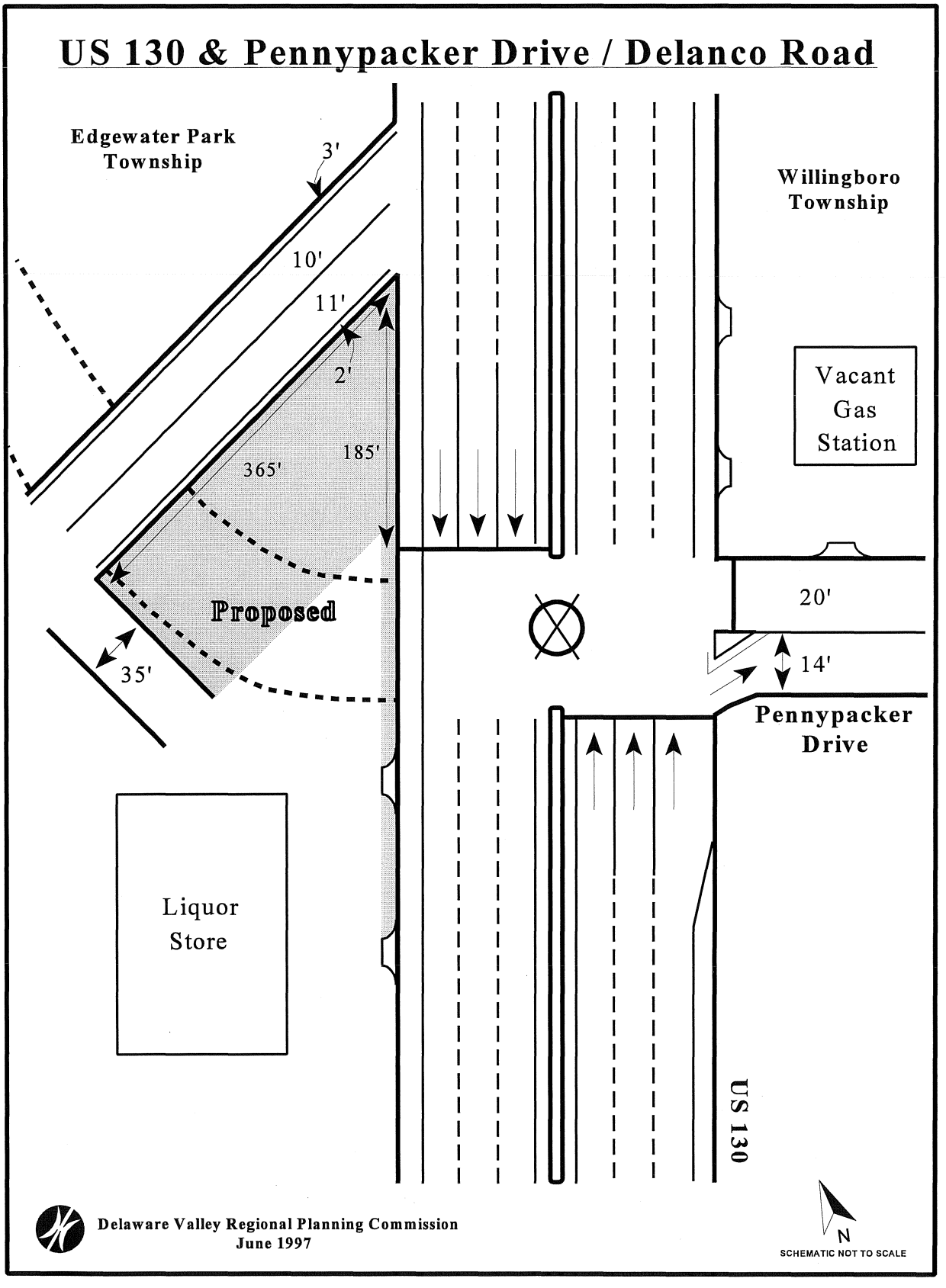
Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area B3 (Burlington Avenue - Delanco Township).

<u>Short Term</u>

- Evaluate the potential for installing a flashing hazard identification beacon at this intersection to heighten awareness of the change in horizontal alignment.
- Install larger chevrons on the curve and oversized DO NOT ENTER signs on Willow Street.
- Install additional and brighter street lighting
- Trim local vegetation to permit better visibility of signing and lighting.

FIGURE 32


US 130 & Pennypacker Drive / Delanco Road
Edgewater Park Township
Willingboro Township
3'
10'
11'
2'
365'
185'
Proposed
35'
Vacant Gas Station
20'
14'
Pennypacker Drive
Liquor Store
US 130
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

31. US 130 AND PENNYPACKER DRIVE / DELANCO ROAD (CR 624) MILE POST: 42.7
Willingboro Township and Edgewater Park Township

Existing Conditions:

The intersection of US 130 and Pennypacker Drive is a three leg signalized intersection. Pennypacker Drive intersects US 130 from the east but does not continue across the highway. Right turns and left turns are permitted from the 20-foot westbound Pennypacker Drive approach. Northbound US 130 carries three lanes into the intersection and permits right turns onto Pennypacker Drive. Southbound US 130 also carries three lanes into the intersection but there are no turns permitted from this approach. Pennypacker Drive connects a densely developed residential section of Willingboro to US 130.

On the west side of US 130, directly across from Pennypacker Drive is the edge of a liquor store parking lot and a vacant field. Just south of the intersection on the west side of US 130 is the liquor store and the remainder of its parking lot with two access points to the highway. A vacant gas station is located on the northeast corner and an open field is located on the southeast corner.

Delanco Road intersects US 130 from the west and also forms a three leg intersection. However, there is no median break on US 130 and there is no traffic signal. Only right-in/right-out movements to and from Delanco Road are permitted at this location. The Delanco Road intersection is approximately 185 feet north of the Pennypacker Drive intersection. however no connection can be made between Pennypacker Drive and Delanco Road.

Identified Problems:

- Mobility is limited in this area by the lack of a connection between Delanco Road and Pennypacker Drive and the inability to serve all turning movements at these two intersections.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A7 (US 130 Highway Frontage - Edgewater Park, Delanco and Willingboro Townships).

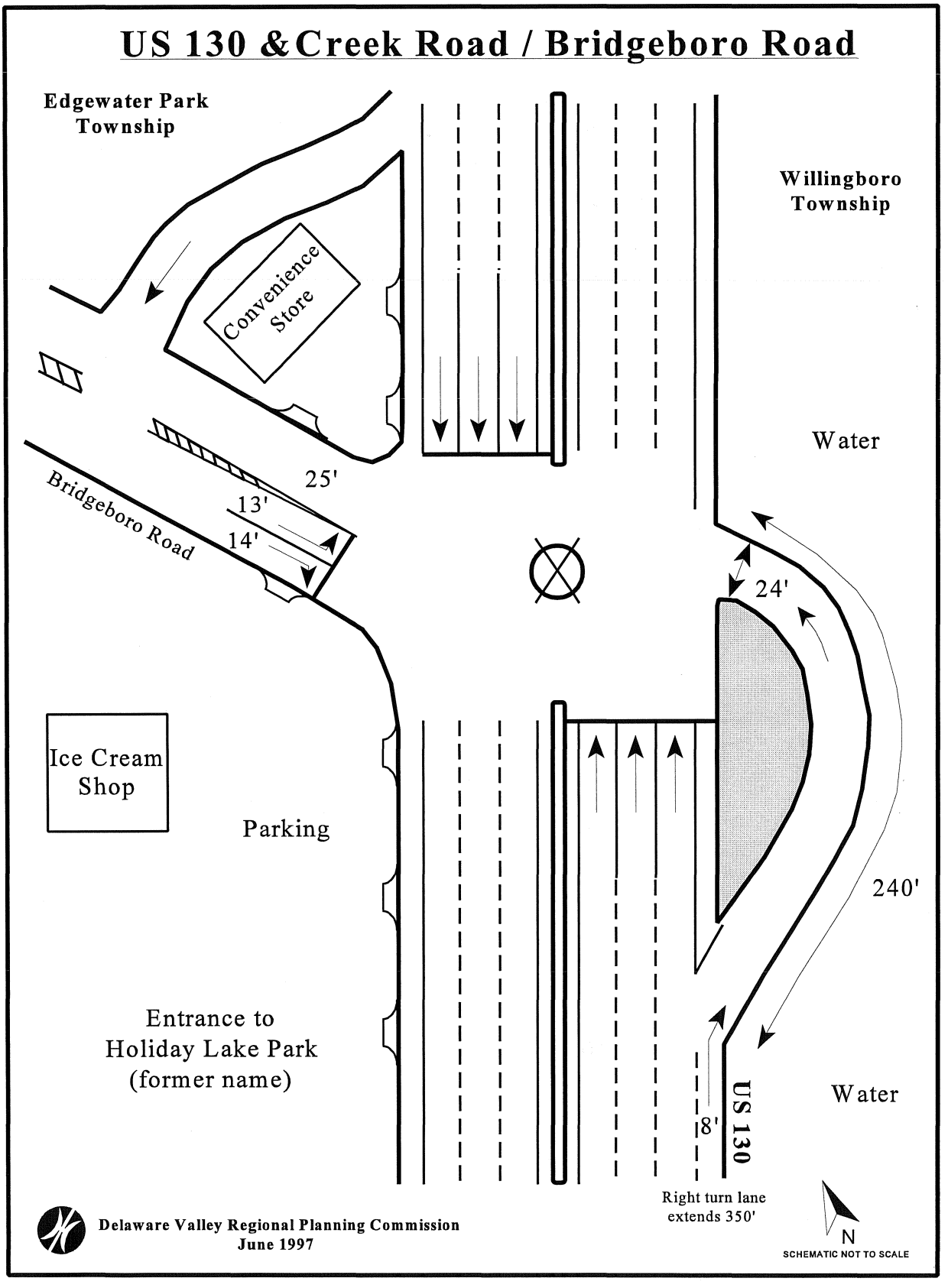
<u>Long Term</u>

- Extend Pennypacker Drive across US 130 through the edge of the parking lot and vacant field where it would connect with Delanco Road. This extension would also serve as the terminus of the proposed local circulation road envisioned as a rear access road parallel to US 130

between Pennypacker Drive and VanSciver Parkway (see problem location # 21). This new facility would serve as a local circulation road and provide access for Edgewater Park and Willingboro residents to the businesses adjacent to southbound US 130 without using the highway itself. This improvement could provide significant economic development benefits for the developed as well as undeveloped parcels located along the new circulation road. Increasing the accessability of those businesses makes them more attractive to the local market. Providing roadway frontage to undeveloped parcels that previously had no frontage increases their development potential and their property values.

- The existing section of Delanco Road between US 130 and the proposed connector road should be retained and used as a southbound near side jughandle for U-turns or left turns onto Pennypacker Drive.
- A northbound nearside jughandle would need to be constructed in the open field in the southeast quadrant.

FIGURE 33


US 130 &Creek Road / Bridgeboro Road
Edgewater Park Township
Willingboro Township
Convenience Store
Water
25'
13'
14'
Bridgeboro Road
24'
Ice Cream Shop
Parking
240'
Entrance to Holiday Lake Park (former name)
US 130
8'
Water
Right turn lane extends 350'
N
SCHEMATIC NOT TO SCALE
Delaware Valley Regional Planning Commission
June 1997

32. US 130 AND CREEK ROAD (CR 625) / BRIDGEBORO ROAD MILE POST: 41.6

Willingboro Township and Edgewater Park Township

Existing Conditions:

Traffic operations at this intersection are controlled by a two phase traffic signal. The Creek Road approach is afforded an advance interval to provide a protected movement for the left turns. US 130 carries three travel lanes plus an eight-foot outside shoulder and a two-foot inside shoulder in each direction through this intersection. The northbound and southbound directions are separated by a concrete median barrier. Treatment for left turns, right turns and U-turns is through near-side jughandles.

In the southbound direction, the jughandle departs US 130, goes behind a convenience store, then intersects Creek Road approximately 250 feet west of US 130. There are two driveways from US 130 into the convenience store parking lot but no access to or from the jughandle.

In the northbound direction, the jughandle departs US 130 and then intersects US 130 opposite Creek Road. Since the interior of the jughandle is not developed, there are no driveways from the jughandle. The jughandle itself is 240 feet long and provides a 24-foot wide cartway as an approach to US 130. This approach is not striped to designate turning lanes. The eight-foot shoulder on US 130 approaching the jughandle has been converted to a right turn lane. This right turn lane extends for a distance of 350 feet. Several feet east of US 130 and the jughandle the ground slopes down to an adjacent lake.

Creek Road makes up the western leg of the intersection. The approach consists of a 13-foot left turn lane and a 14-foot right turn lane. The eastbound departure lane is 25 feet wide. There is only one curb cut along the north side of Creek Road between US 130 and the jughandle. An ice cream shop is located in the southwest quadrant.

Recent improvements on the western leg included relocating the Creek Road / Bridgeboro Road intersection approximately 600 feet to the west along Bridgeboro Road, widening Bridgeboro Road to provide a westbound left turn lane onto Creek Road, and widening and extending the approach lanes to US 130.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 48,200 vehicles on US 130 just south of the intersection and approximately 3,000 vehicles per day on Creek Road.

Identified Problems:

- The primary problem at this location is the queue which forms on the northbound jughandle and spills back onto US 130. This 240-foot jughandle can accommodate approximately 12 vehicles before the queue backs out onto the shoulder/right turn lane. This problem is especially acute in the peak periods but can occur intermittently throughout the day.
- Widening or extending the existing northbound jughandle is constrained by the proximity of the adjacent lake.
- The northbound jughandle approach to the intersection is provided the least amount of green time from the signal timing.
- Construction of a Creek Road / Burlington Street connector (see problem location # 28) would encourage additional traffic through this intersection.
- Recent improvements to realign and relocate the Creek Road and Bridgeboro Road intersection have provided noticeable benefits for this location.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A7 (US 130 Highway Frontage - Edgewater Park, Delanco and Willingboro Townships).

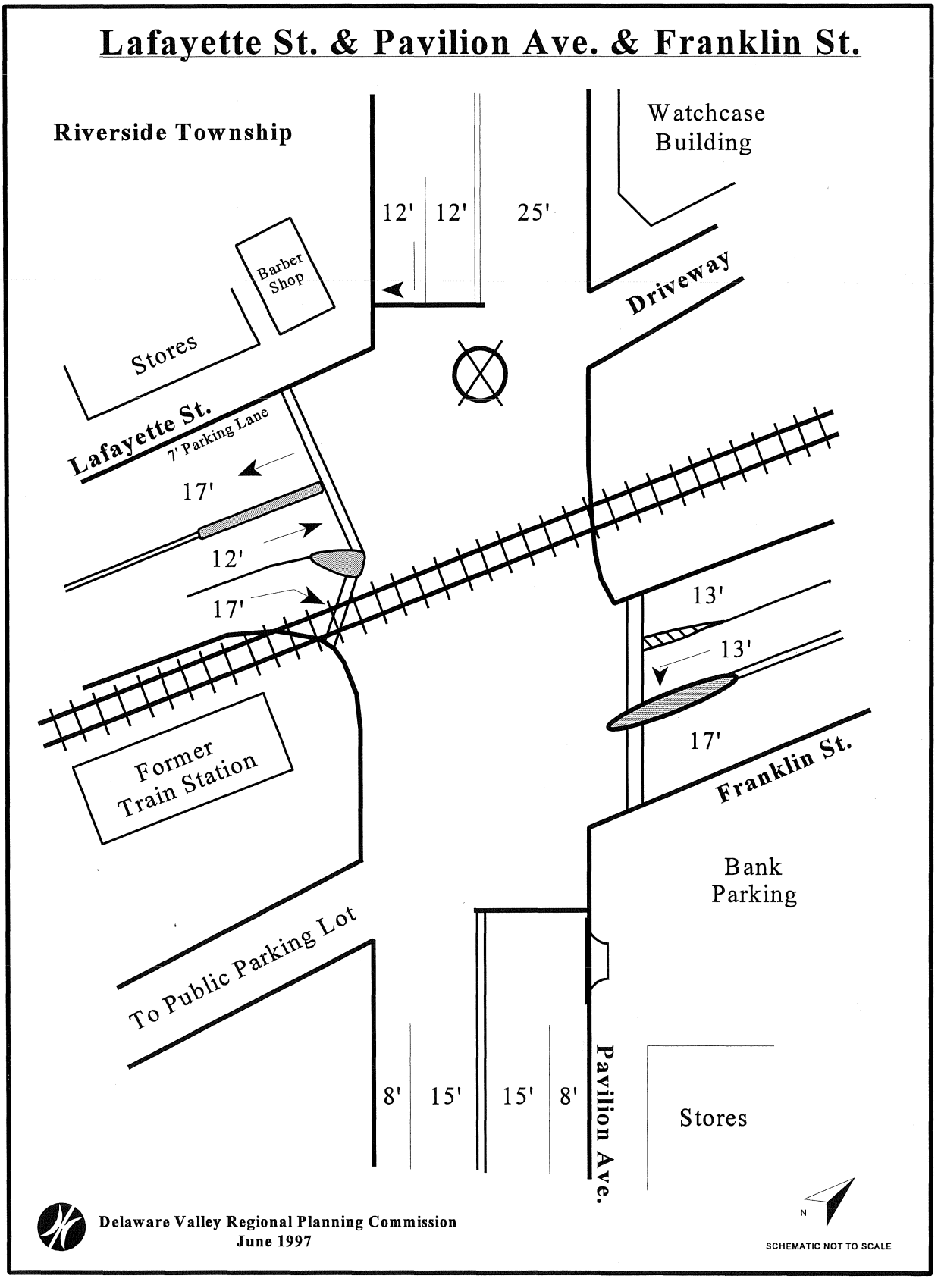
Short Term

- Analyze the signal timing operations to determine if the jughandle approach can be assigned a higher percentage of the green time without adversely effecting the overall operations of the intersection. It may be more appropriate to permit longer queues on Creek Road if it will reduce the amount of spillover from the jughandle onto US 130.
- Truck volumes prohibit restripping the jughandle approach to provide a separate left turn lane and a through lane.

Long Term

- Options have been discussed with both Edgewater Park and Willingboro to relocate the intersection and jughandle approximately 900 feet to the north. This option would require construction of a connecting road from US 130 to the newly realigned Creek Road between the steak restaurant and new food store on the southbound side of US 130. It would also require the construction of a reverse jughandle for northbound US 130. These improvements were determined to be infeasible because of the recent development on the west side and reserved open space on the east side.
- A study should be conducted in order to identify options which would redirect traffic out of this intersection.

FIGURE 34


Lafayette St. & Pavilion Ave. & Franklin St.
Riverside Township
Watchcase Building
12'
12'
25'
Barber Shop
Stores
Driveway
Lafayette St.
7' Parking Lane
17'
12'
17'
13'
13'
17'
Former Train Station
Franklin St.
Bank Parking
To Public Parking Lot
8'
15'
15'
8'
Pavilion Ave.
Stores
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

33. LAFAYETTE STREET (CR 543) AND PAVILION AVENUE AND FRANKLIN STREET

Riverside Township

Existing Conditions:

This location operates as a four leg intersection even though Lafayette Street and Franklin Street are offset from each other along Pavilion Avenue. The Conrail line crosses Pavilion Avenue between Lafayette Street and Franklin Street. Lafayette Street forms the western leg of the intersection and intersects Pavilion Avenue along the north side of the railroad tracks. Franklin Street represents the eastern leg of the intersection and intersects Pavilion Avenue to the south of the railroad tracks. The traffic operations are controlled by a three phase traffic signal operation, during which Lafayette Street and Franklin Street operate on separate phases.

The northern leg of Pavilion Avenue carries an 11.5-foot right turn lane and an 11.5-foot through lane into the intersection. The departure lane on this leg is 25 feet wide. There is a low volume driveway located north of the railroad tracks which provides access to/from the Watchcase Building. Movements to and from this driveway are not controlled by the traffic signal. Most of the floors of this former manufacturing building are unoccupied, although redevelopment is actively being sought for this facility and several adjacent properties. If redevelopment occurs in the Watchcase Building or on the surrounding properties, it could have a significant impact on the operations of this intersection.

At the intersection, the southern leg of Pavilion Avenue consists of a 23-foot travel way in each direction. Approximately 100 feet south of the intersection, an eight-foot parking lane reduces the travel lane to 15 feet in each direction. The on-street parking serves the adjacent commercial uses in this downtown area. A one-way driveway, located approximately 25 feet south of Lafayette Street, provides access from Pavilion Avenue to a public parking lot. A former train station, located between the rail line and the public parking area has been converted into a gift shop.

On the western leg, Lafayette Street carries a 12-foot left turn lane and a 17-foot right turn lane into the intersection. The 17-foot departure lane is supplemented by a 7-foot parking lane. The departure and approach lanes are separated by a raised concrete median. The rail line runs along the south side of Lafayette Street while store fronts line the north side.

Franklin Street consists of a 13-foot right turn lane, a 13-foot left turn lane and a 17 foot departure lane. The rail line runs along the north side of Franklin Street while commercial uses line the south side.

New Jersey Transit is evaluating the potential for light rail transit service on the Conrail line which runs generally parallel to US 130 from Camden to Trenton. This evaluation includes examining the potential for locating a stop along the line just south of Pavillion Avenue. This location could have an impact on the traffic conditions at this intersection.

Identified Problems:

- During a field visit, a train was observed crossing Pavilion Street. During the time when the rail-crossing lights were flashing and the bells were ringing, the traffic signal continued its normal operation and vehicles continued to move through the intersection until the train was very close.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A8 (Waterfront and Downtown Business District - Riverside Township)

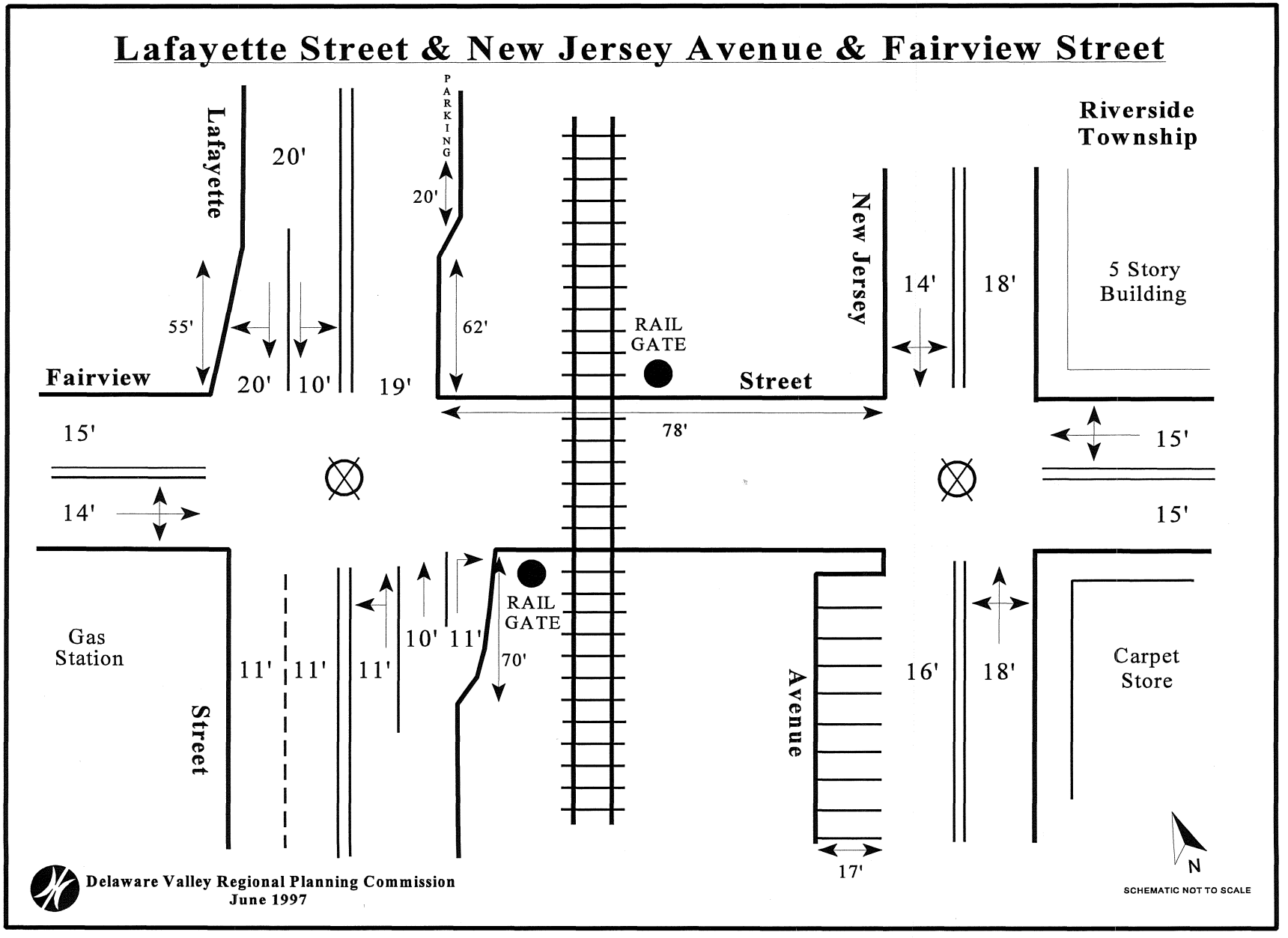
Short Term

- When highway intersection traffic control signals are located within 200 feet of a grade crossing and that grade crossing is equipped with an active traffic control system, the normal sequence of highway intersection signal indications should be preempted upon approach of trains to avoid entrapment of vehicles on the crossing by conflicting aspects of the highway traffic signals and the grade crossing signals
- Coordinate the signal timing between this intersection and the adjacent signalized intersection at Pavilion Avenue and Scott Street which is located approximately 300 feet south of Franklin Street

Long Term

- In the event of the location of a stop on the proposed light rail transit line or the redevelopment of the Watchcase Building or the surrounding properties, the operating conditions at this intersection must be closely monitored.

FIGURE 35


Lafayette Street & New Jersey Avenue & Fairview Street
Lafayette
20'
PARKING
20'
Riverside Township
New Jersey
14'
18'
5 Story Building
55'
62'
RAIL GATE
Fairview
20'
10'
19'
Street
78'
15'
15'
14'
15'
RAIL GATE
Gas Station
11'
11'
11'
10'
11'
70'
Avenue
16'
18'
Carpet Store
Street
17'
N
Delaware Valley Regional Planning Commission
June 1997
SCHEMATIC NOT TO SCALE

34. LAFAYETTE ST (CR 543) AND FAIRVIEW ST
NEW JERSEY AVE AND FAIRVIEW ST
Riverside Township

Existing Conditions:

Lafayette Street and New Jersey Avenue run parallel to each other separated by approximately 78 feet. Between these two roads, is an active Conrail freight line. Fairview Street, oriented in an east west direction, intersects all three facilities. Operations at the roadway intersections are controlled by traffic signals. Although the signals are coordinated, the signal timing does not appear to be optimized. Traffic on Fairview Street is protected from the rail crossing by gates and lights.

All approaches at the New Jersey Avenue intersection consist of one travel lane and no shoulders. Fairview Street provides a one lane approach to the intersection in each direction. On the southwest corner, there is a gravel area that accommodates 24 off-street parking spaces for the carpet store. The proximity of buildings on the northeast and southeast corners restrict sight distance for vehicles on New Jersey Avenue. The cross walks and stop bars are faded and barely visible. The pavement surface is in poor condition.

Lafayette Street carries two lanes into the intersection and two lanes away from the intersection in the southbound direction. The northbound approach provides a right turn lane, a through lane and a shared through and left turn lane. The opportunity to continue two northbound lanes across the intersection is lost because the northbound departure is stripped for one 19-foot lane. The northbound travelway is reduced further as on-street parking is introduced approximately 120 feet north of the intersection. Fairview Street provides a one lane approach to the intersection in each direction. The posted speed limit is 45 MPH on southbound Lafayette Street and 30 MPH on northbound Lafayette Street.

Identified Problems:

- The transition on northbound Lafayette Street from two travel lanes to one is not signed and is very abrupt. This merge must be accomplished in a short distance. The combination of the lane elimination and the on-street parking north of the intersection is problematic.
- The signal timing does not provide adequate timing for all approaches and can result in peak period congestion.

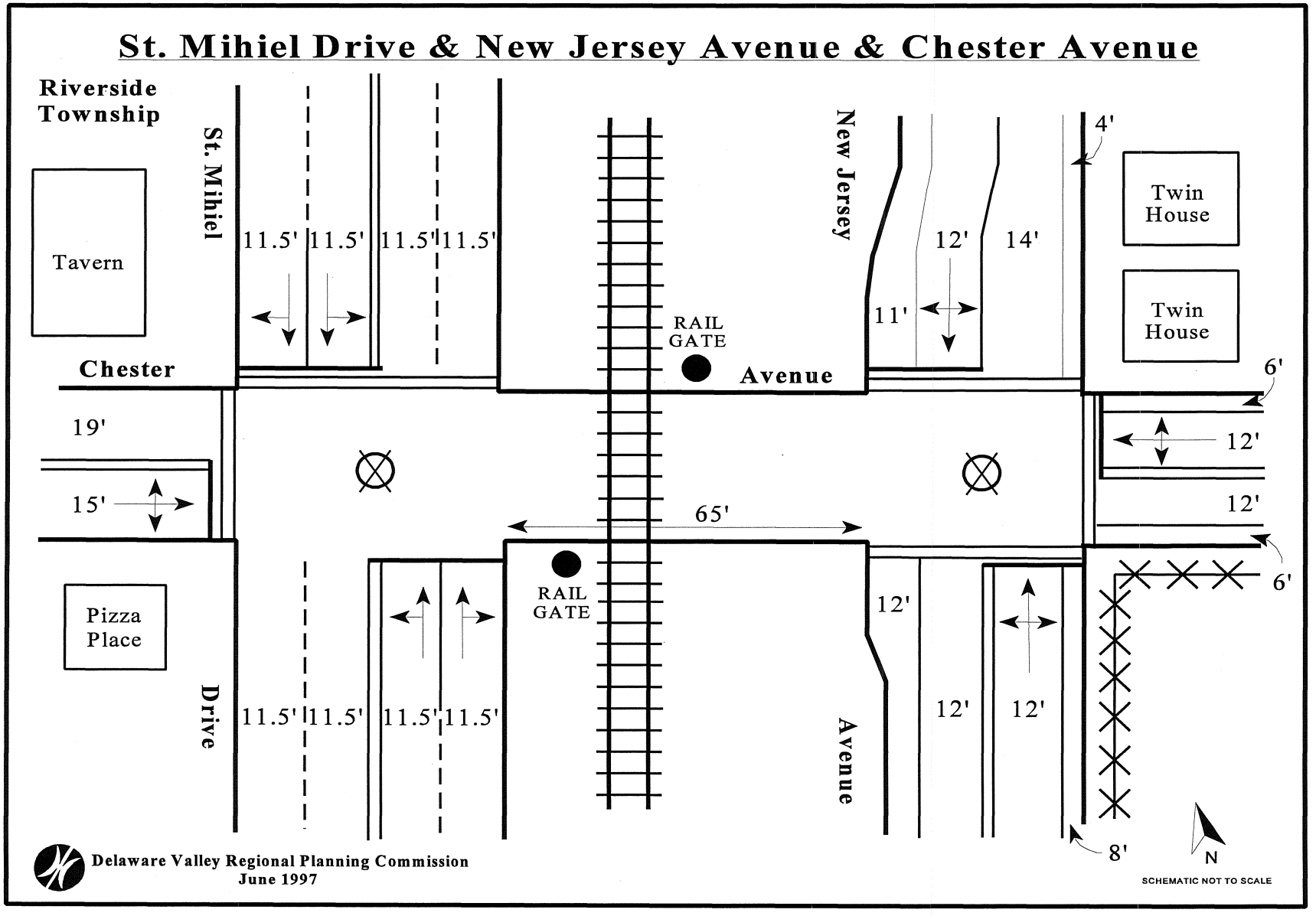
Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A8 (Waterfront and Downtown Business District - Riverside Township)

Short Term

- Ease the transition on northbound Lafayette Street from two travel lanes to one by installing the appropriate lane reduction transition signing (W4-2, W9-1, W9-2) in advance of the intersection, providing two departure lanes for a short distance and delaying the initiation of on-street parking.
- Optimize the signal timing between Lafayette Street and New Jersey Avenue.
- Resurface the intersection and repaint the crosswalks, stop bars and lane lines.

FIGURE 36


St. Mihiel Drive & New Jersey Avenue & Chester Avenue
Riverside Township
St. Mihiel
Tavern
11.5'
11.5'
11.5'
11.5'
New Jersey
4'
12'
14'
11'
Twin House
Twin House
RAIL GATE
Chester
Avenue
6'
19'
12'
15'
65'
12'
6'
RAIL GATE
Pizza Place
12'
Drive
11.5'
11.5'
11.5'
11.5'
Avenue
12'
12'
8'
N
Delaware Valley Regional Planning Commission
June 1997
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35. ST. MIHIEL DR (CR 543) AND CHESTER AVE (CR 604)
NEW JERSEY AVE AND CHESTER AVE (CR 604)

Riverside Township

Existing Conditions:

St. Mihiel Drive and New Jersey Avenue run parallel to each other separated by approximately 65 feet. Between these two roads, is an active Conrail freight line. Chester Avenue, oriented in an east west direction, intersects all three facilities. Operations at the roadway intersections are controlled by traffic signals. Traffic on Chester Avenue is protected from the rail crossing by gates and lights. New traffic signal equipment was recently installed and the road surface was recently repaved and restriped.

The cartway on the northern leg of New Jersey Avenue is 41 feet from curb to curb. The southbound approach consists of a 12-foot travel lane and an 11-foot shoulder. The shoulder is used as a defacto right turn lane. The northbound departure consists of a 14-foot travel lane and a 4-foot shoulder. On-street parking is permitted on the shoulder. Vehicles parked on this shoulder encroach onto the travel lane. The land use fronting this leg of the intersection is residential. On the southern leg, there is a 12-foot travel lane and an 8-foot shoulder on the approach. The southbound departure consists of a 12-foot travel lane and a 12-foot shoulder which is used for on-street parking. Chester Avenue carries one lane in each direction through both intersections. The speed limit on Chester Avenue and on New Jersey Avenue is 25 MPH.

St. Mihiel Drive carries two lanes in each direction through the intersection. There are no shoulders or special provisions for turns from St. Mihiel Drive onto Fairview Street. The posted speed limit on St. Mihiel Drive is 45 MPH in each direction.

Identified Problems:

- The pavement markings on the southbound New Jersey Avenue approach are confusing. The solid white line that delineates the shoulder is frequently ignored and the shoulder is used as a right turn lane. This could cause problems for vehicles attempting a proper right turn from the travel lane.
- Vehicles parked on the shoulder adjacent to the northbound departure lane encroach onto the travel lane and create unsafe conditions.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A8 (Waterfront and Downtown Business District - Riverside Township)

Short Term

- The existing 41-foot cartway on the northern leg of New Jersey Avenue could by better utilized through restriping. An 8-foot parking lane should be provided for the residents on the northbound side. The northbound and southbound travel lanes should be 12 feet wide and 11 feet wide respectively. The remaining 10 feet should be used for a designated right turn lane.
- Monitor the operating conditions at both intersections to determine if the optimum signal timing is in place.

36. US 130: FROM TENBY CHASE DRIVE TO CREEK ROAD (CR 636) MILE POST: 38.9 TO 40.6

Delran Township

Existing Conditions:

This 1.7 mile section of US 130 is characterized by intense highway commercial development. US 130 carries three travel lanes in each direction and is separated by a concrete median barrier. Traffic signals are located at the following five intersections: Tenby Chase Drive, Haines Mill Road, Chester Avenue, Holy Cross High School Entrance and Fairview Street. Left turns are accommodated at each intersection through near-side jughandles except for the entrance to the High School. There is no median break at this location. Consistent with the adjacent highway commercial land use, there are numerous curb cuts to provide access and egress to/from these properties. In some locations where the individual property frontage is short, the driveways from adjacent properties are very close and can cause conflicts for vehicles exiting and entering.

In the northbound direction, there are 12 curb cuts in the 1,800-foot section between Suburban Boulevard and Haines Mill Road. These access points serve the Millside Shopping Center and the adjacent retail establishments.

There are 17 curb cuts on the northbound side in the 1,600-foot section between Chester Avenue and Hartford Road. These access points serve the individual retail establishments located along this section.

In the 2,500-foot section between Fairview Street and Creek Road, there are 20 curb cuts on the northbound side These access points serve the individual retail establishments located along this section.

In the southbound direction, there are 18 curb cuts located between Haines Mill Road and Suburban Boulevard. Some of these accesses serve individual isolated properties, others serve adjacent properties which could potentially be connected with internal circulation while others serve former establishments which are now undeveloped.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 44,700 vehicles on US 130 between Creek Road and Fairview Street (CR 605).

Identified Problems:

- The primary problem along this section of US 130 is the excessive use of curb cuts to access adjacent commercial properties. The availability of many curb cuts creates conflicts between the through traffic and turning vehicles, impeding traffic flow and creating hazardous conditions.
- There are several currently undeveloped properties in this section which have driveways that were used to serve previous development on that parcel.
- Another problem associated with this section is the stop and go traffic conditions encountered because of the signalized intersections.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A10 (US 130 Highway Frontage - Delran and Cinnaminson Townships).

Short Term

- Develop a specific access management plan for this section of US 130 which seeks to eliminate unnecessary curb cuts to and from the highway. The plan should seek to close off unnecessary curb cuts and enhance access and mobility through shared driveways and internal circulation between adjacent properties. The strategy for achieving this objective is to encourage adjacent property owners to permit property to property movements away from the highway.
- The traffic signal timing at the three signalized intersections of Suburban Boulevard, Haines Mill Road and Chester Avenue should be optimized and coordinated to allow for progression of traffic flow through this section. Lack of a median opening at the high school entrance and the distance to Fairview Street, reduce the effectiveness of coordinating these signals with the others and therefore coordination is not recommended .

Long Term

- Those currently undeveloped properties which have driveways that were used to serve previous development should be evaluated in terms of coordinating their future access with adjacent properties as they become redeveloped.
- Construction of an extension of Fairview Street (see problem location # 37) or an extension of Chester Avenue/Haines Mill Road (see problem location #38) will help by allowing some local trips to avoid US 130 and use new local circulation roads.

FIGURE 37

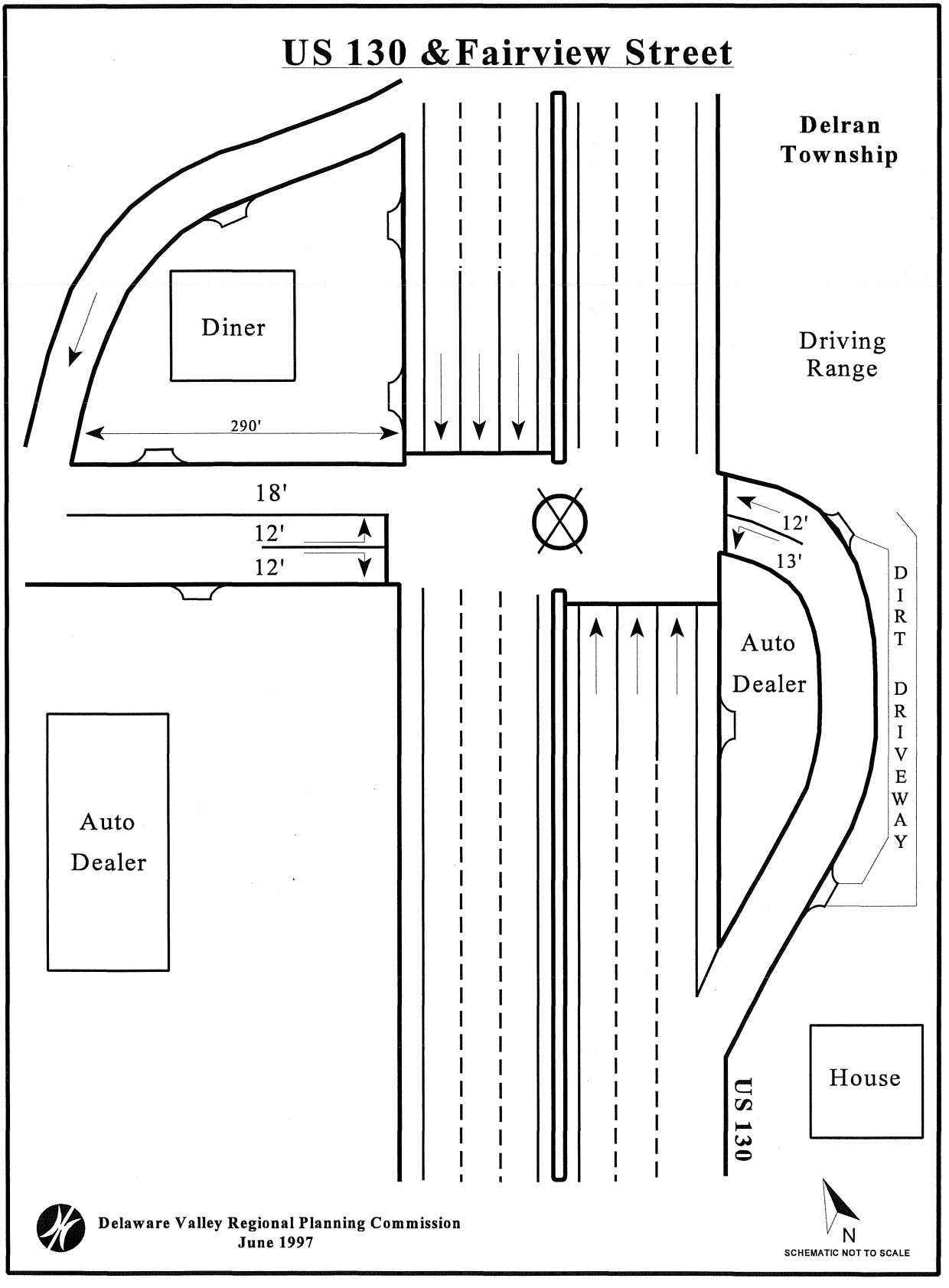
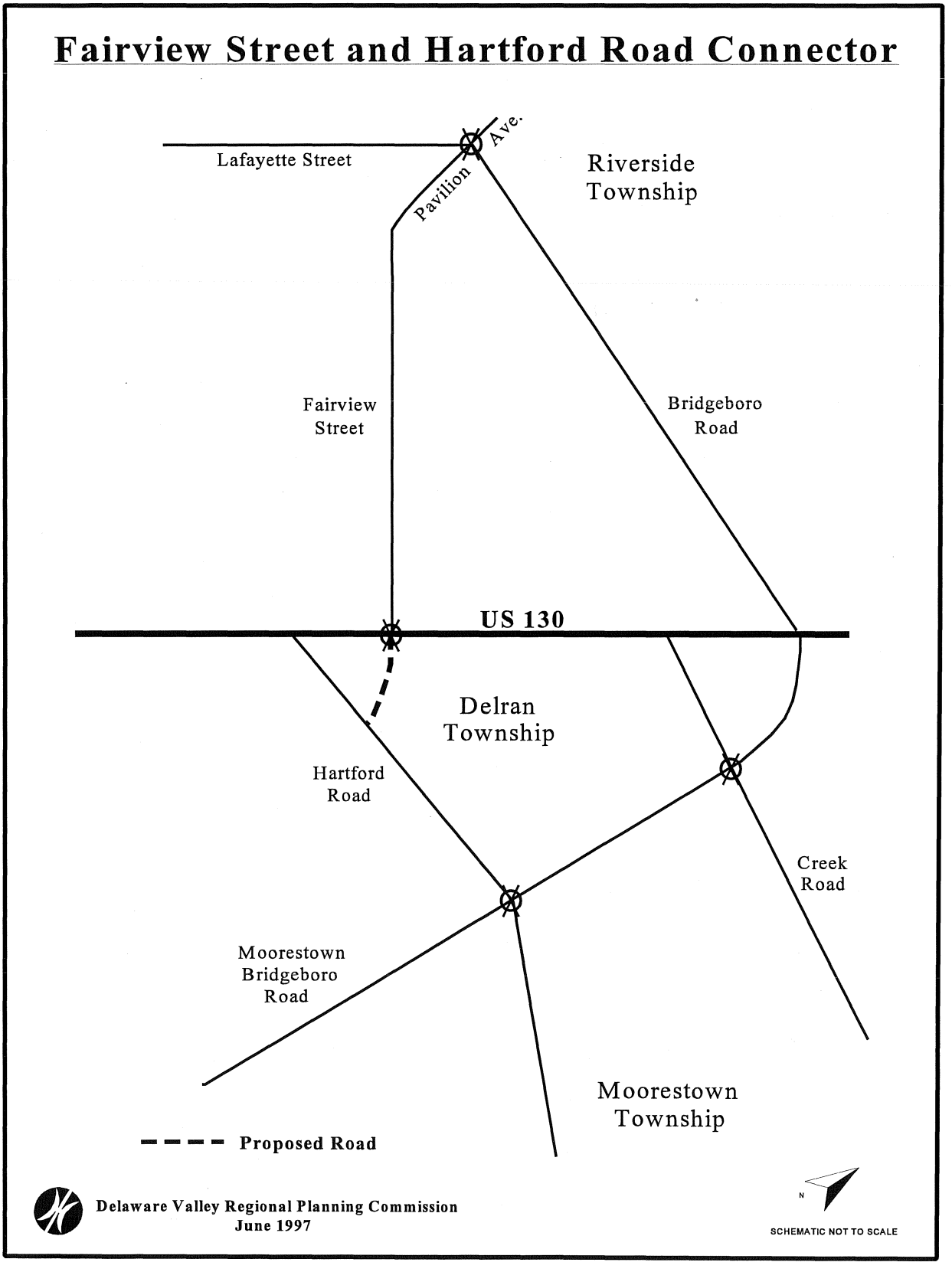

US 130 &Fairview Street
Delran Township
Diner
290'
Driving Range
18'
12'
12'
12'
13'
DIRT DRIVEWAY
Auto Dealer
Auto Dealer
House
US 130
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

FIGURE 38


Fairview Street and Hartford Road Connector
Lafayette Street
Pavilion Ave.
Riverside Township
Fairview Street
Bridgeboro Road
US 130
Delran Township
Hartford Road
Creek Road
Moorestown Bridgeboro Road
Moorestown Township
Proposed Road
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

37. US 130 AND FAIRVIEW STREET (CR 605)/HARTFORD RD CONNECTOR MILE POST: 40.1

Delran Township

Existing Conditions:

Traffic operations at this intersection are controlled by a two-phase signal which provides an advance for Fairview Street. Fairview Street intersects US 130 on the west side and does not cross US 130. As the western leg of the intersection, Fairview Street carries a 12-foot left turn lane and a 12-foot right turn lane into the intersection. The departure lane is 18 feet wide. The speed limit on Fairview Street is 25 MPH.

The eastern leg of the intersection serves as the near-side jughandle for northbound US 130 traffic. This jughandle provides a 12-foot through lane and a 13-foot left turn lane. The used car dealer located within the jughandle has access only to US 130 and not onto the jughandle. An access is provided from the jughandle to the driving range, located north of the intersection. Another curb cut on the jughandle provides access to a residential property located south of the intersection, adjacent to the jughandle.

US 130 carries three travel lanes plus an eight-foot outside shoulder and a two-foot inside shoulder in each direction through this intersection. The northbound and southbound directions are separated by a concrete median barrier. The speed limit on US 130 is 50 MPH. In the southbound direction a nearside jughandle goes around the diner located on the northwest corner and intersects Fairview Street 290 feet west of US 130. There is an access from the rear of the diner's parking lot to the jughandle.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 9,400 vehicles on Fairview Street.

Identified Problems:

- US 130 presents a physical barrier to cross township traffic flow. The road layout in the township is such that other than the Moorestown Bridgeboro Road interchange at the northern edge of the township there are no streets in Delran which run directly across US 130 and provide access to both sides of the township. All other intersecting streets are either off-set intersections or three-leg intersections.
- Hartford Road intersects US 130 approximately 1,600 feet south of Fairview Street. Vehicles traveling westbound on Hartford Road must turn right onto US 130 and go north to Fairview Street to cross the highway or to make a U-turn.

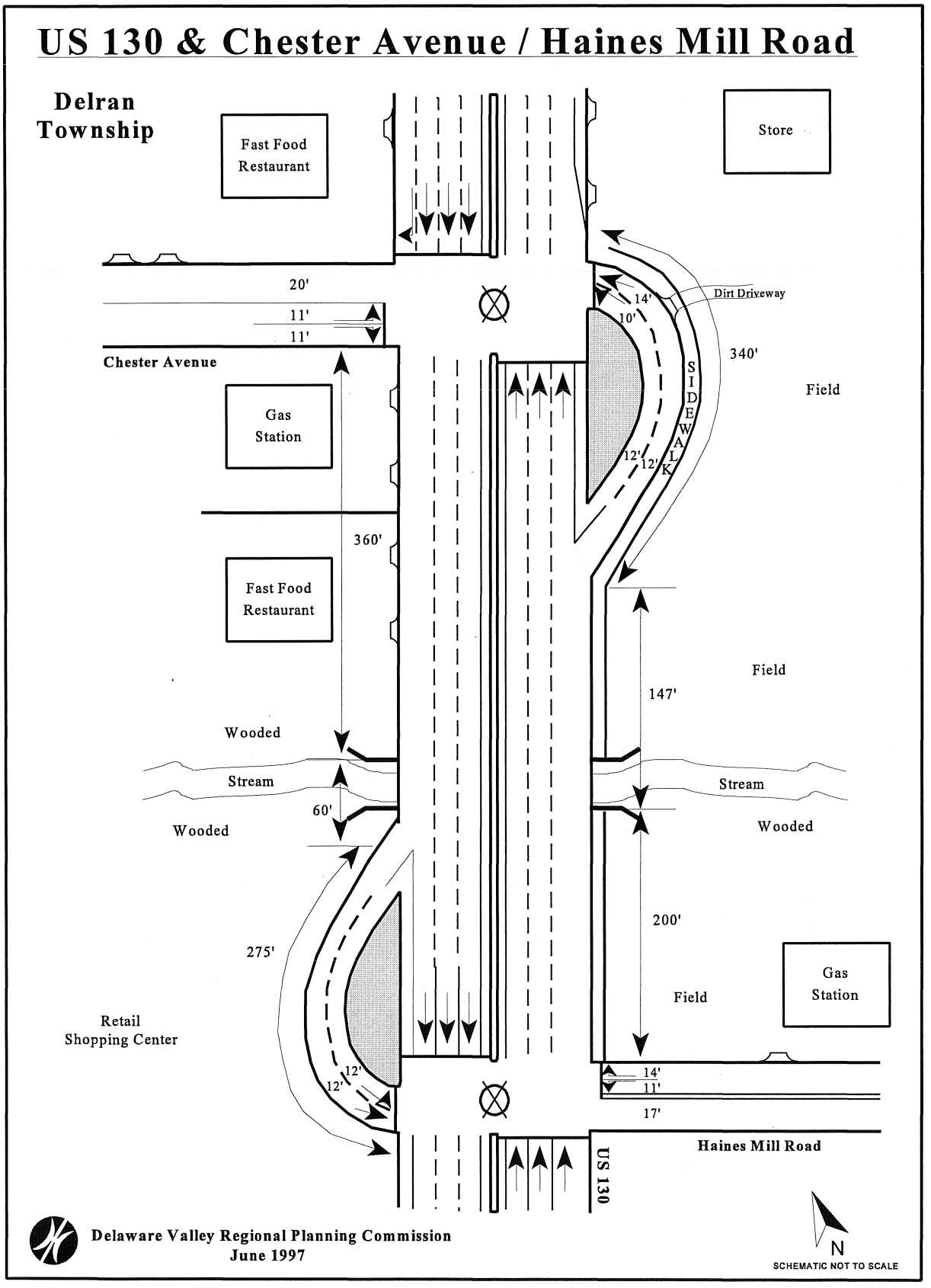
Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A10 (US 130 Highway Frontage - Delran and Cinnaminson Townships).

Short Term

- Discussions have been held between township officials, the affected property owner, the county, NJ DOT and DVRPC concerning the construction of an extension of Fairview Street to Hartford Road. All those involved in the discussion were in favor of the concept, agreeing also that further analyses need to be done. This improvement is identified as short term due to the preliminary approval of the concept by the stakeholders and the possibility that some of the required steps could potentially be done through private sector involvement.
- The concept is to extend Fairview Street across the driving range and intersect Hartford Road approximately 1,800 feet east of US 130. The potential alignment is envisioned to require right of way from only one parcel. An investigation should be undertaken which evaluates whether a nearside or a reverse jughandle would be more appropriate. Hartford Road carries an 11-foot lane and a two-foot shoulder in each direction and has a posted speed limit of 25 MPH in this vicinity.
- This improvement would greatly increase circulation in this area of the township and would provide an important cross-county connection. This connection would provide access between Riverside's downtown area/LRT stop and the Delran/Moorestown area. Although it would require the loss of some land by the property owner, the parcel would gain additional road frontage and enjoy improved access. The potential creation of a commercial node adjacent to the new roadway is also envisioned.

FIGURE 39


US 130 & Chester Avenue / Haines Mill Road
Delran Township
Fast Food Restaurant
Store
20'
11'
11'
Chester Avenue
Dirt Driveway
14'
10'
340'
Field
SIDEWALK
12'
12'
Gas Station
360'
Fast Food Restaurant
Field
147'
Wooded
Stream
60'
Wooded
Stream
Wooded
200'
275'
Gas Station
Field
Retail Shopping Center
12'
12'
14'
11'
17'
Haines Mill Road
US 130
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

38. US 130 AND CHESTER AVENUE (CR 604) / HAINES MILL ROAD MILE POST: 39.5
Delran Township

Existing Conditions:

Chester Avenue and Haines Mill Road each form a three-leg intersection with US 130 and are off set by approximately 600 feet. Chester Avenue intersects US 130 on the west while Haines Mill Road is located on the eastern side of the highway. This is another example of how US 130 creates a physical barrier through Delran and how the cross streets do not provide a direct connection across the highway. Both intersections are signalized and left turns are accommodated by near side jughandles. The area along the highway is characterized by intense retail development. However, a stream flanked by designated open space runs under US 130 almost directly between these two intersections.

US 130 carries three travel lanes and a right turn lane in the southbound direction approaching Chester Avenue. There are also three travel lanes in the northbound direction. Chester Avenue provides an 11-foot right turn lane, an 11-foot left turn lane and a 20-foot departure lane. The jughandle accommodates a 10-foot left turn lane and a 14-foot through lane. In the southbound direction, between Chester Avenue and the jughandle to Haines Mill Road, the three travel lanes are accompanied by a right turn lane which provides access to the adjacent businesses and jughandle. The same configuration exists in the northbound direction between Haines Mill Road and the jughandle to Chester Avenue except that there are no businesses on that side. Vehicles use these right turn lanes as a stacking lane for overflow from the jughandles.

US 130 carries three travel lanes in the northbound direction approaching Haines Mill Road. On this approach there is no stripping for a shoulder but this area functions as a defacto right turn lane. There are also three travel lanes in the southbound direction. Haines Mill Road provides a 14-foot right turn lane, an 11-foot left turn lane and a 17-foot departure lane. The jughandle accommodates a 12-foot left turn lane and a 12-foot through lane.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 15,300 vehicles on Chester Avenue in the vicinity of Underwood Blvd.

Identified Problems:

- The primary problem is the congestion that occurs on US 130 between these two intersections and the congestion that occurs on Chester Avenue and Haines Mill Road as

vehicles try to access US 130.

- The nature of the off-set intersections, coupled with the demand for cross-township travel and the inability to adequately serve those vehicles stacked on the jughandles are the principal causes for this congestion.
- Because the municipal complex is located on Chester Avenue, the congestion at this intersection can hinder emergency vehicle response when answering a call on the east side of the township.
- The signal timing at these intersections provides a lead green for Chester Avenue and Haines Mill Road while delaying the green indication for those vehicles queued up on the jughandles. This lends to the unsafe conditions of the jughandle traffic spilling back onto US 130.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A10 (US 130 Highway Frontage - Delran and Cinnaminson Townships).

Short Term

- Evaluate the operations of the intersection with a retimed traffic signal which would provide a lead green for the jughandle in an effort to help keep the queue from spilling back onto the highway.

Long Term

- Signal timing alone will only have a minor effect on the operations of these intersections. Discussions with the township, county, NJ DOT and local property owners have centered on the need to create a new connection across US 130 in this vicinity. Several concepts have been discussed and are presented below. Further detailed evaluations and discussions concerning these concepts are required.
- One concept would be to continue Chester Avenue across US 130, curve to the north behind the businesses located along the highway and create a road generally parallel to US 130 which would intersect with Hartford Road. This connection would enhance the cross-township mobility. Along with this potential opportunity there are potential constraints; a greenway has been designated along the Swede Run stream valley and any potential alignment of the connector road would come in close proximity to this sensitive area.
- Another concept would be to extend Haines Mill Road across US 130 and tie into Chester Avenue in the vicinity of the existing municipal building. In theory, this concept has merit, however it also has serious constraints. The positives are that it would permit cross-township travel without using this heavily congested segment of US 130, it could provide direct access to retail developments located on US 130 and on Chester Road, improve emergency response

time to the eastern side of the township and has been discussed with the impacted property owner who is willing to work with the other stakeholders to see if something could be worked out. However, this connector would require the acquisition and demolition of an existing business, require a stream crossing and encroachment on the designated greenways. To the credit of the property owner, he had the foresight to retain an easement for a stream crossing when the land was dedicated to the greenways.

- A third concept would be to connect Chester Avenue to US 130 south of Haines Mill Road by using Underwood Blvd., the existing stream crossing on Underwood Court and constructing a new connector through some vacant property to US 130. Underwood Blvd. is 30 feet wide in each direction with an eight-foot landscaped median and serves as the main circulation road within an industrial park. The Underwood Court bridge over Swedes Run is 30 feet wide. This alignment does little for cross-township travel but could provide significant benefits to Chester Avenue/Haines Mill Road intersections by removing traffic headed south on US 130.

FIGURE 40

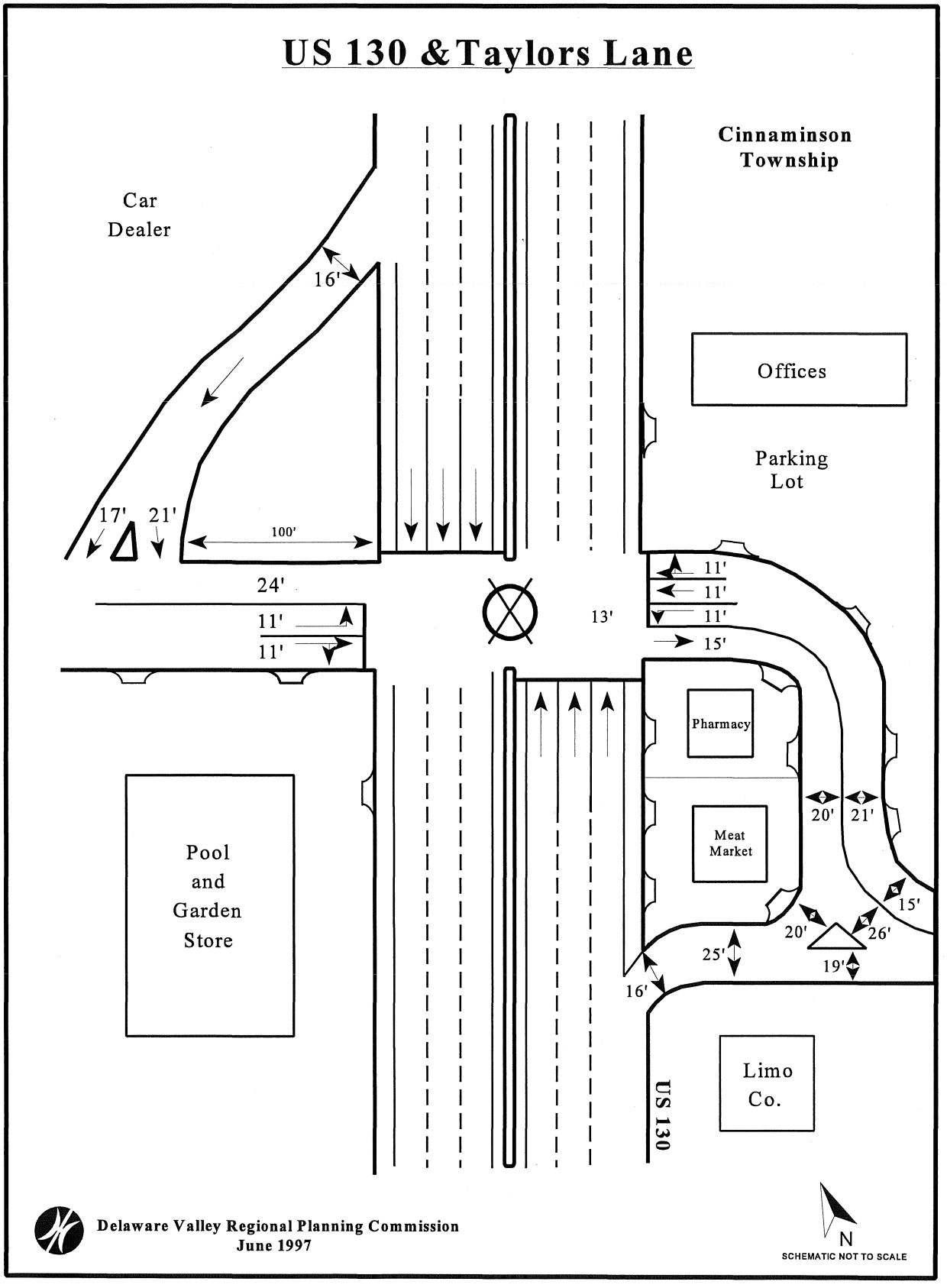

US 130 & Taylors Lane
Cinnaminson Township
Car Dealer
16'
Offices
Parking Lot
17'
21'
100'
24'
11'
11'
13'
11'
11'
11'
15'
Pharmacy
Pool and Garden Store
Meat Market
20'
21'
15'
20'
26'
25'
19'
16'
Limo Co.
US 130
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

FIGURE 41

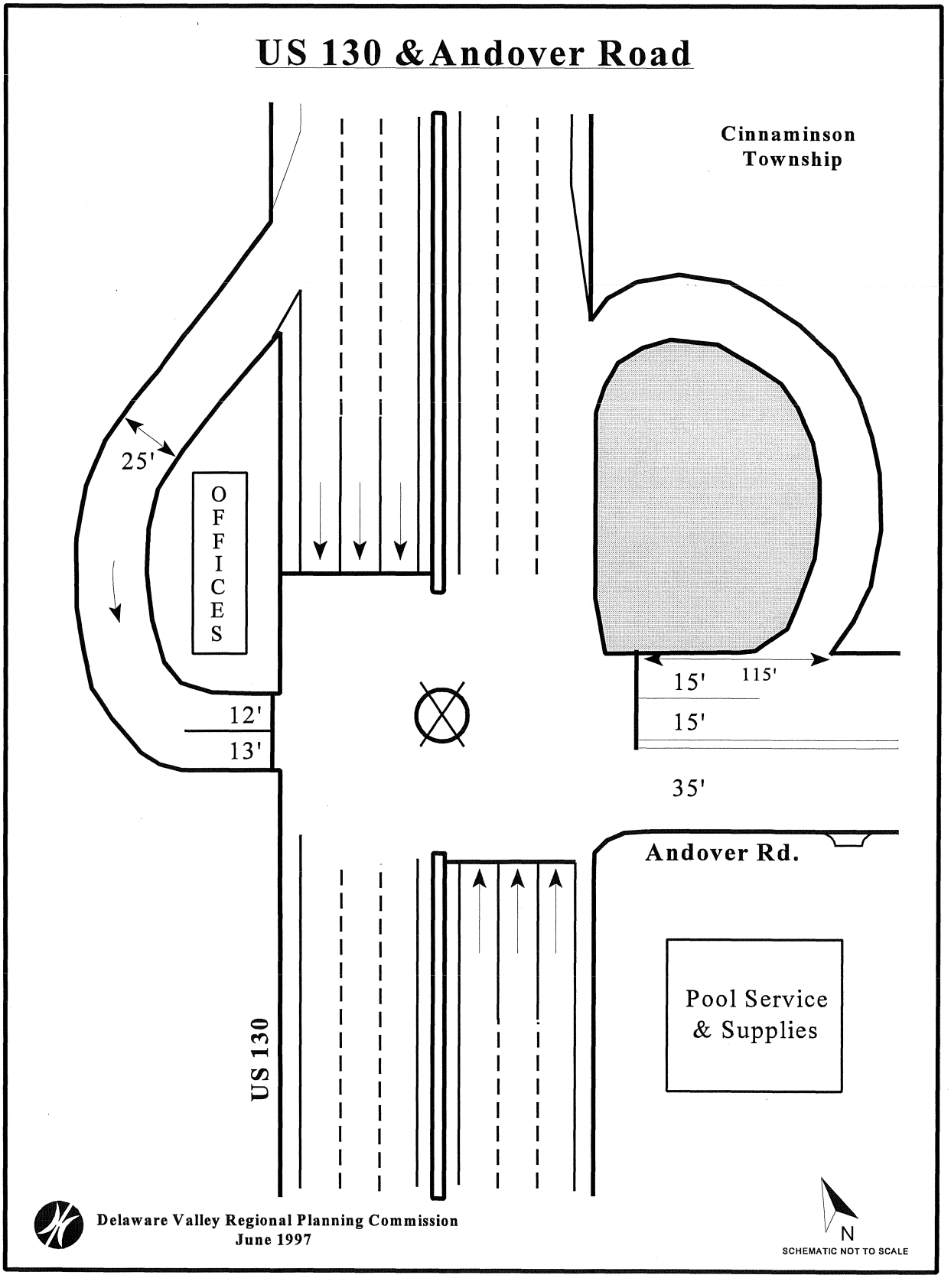
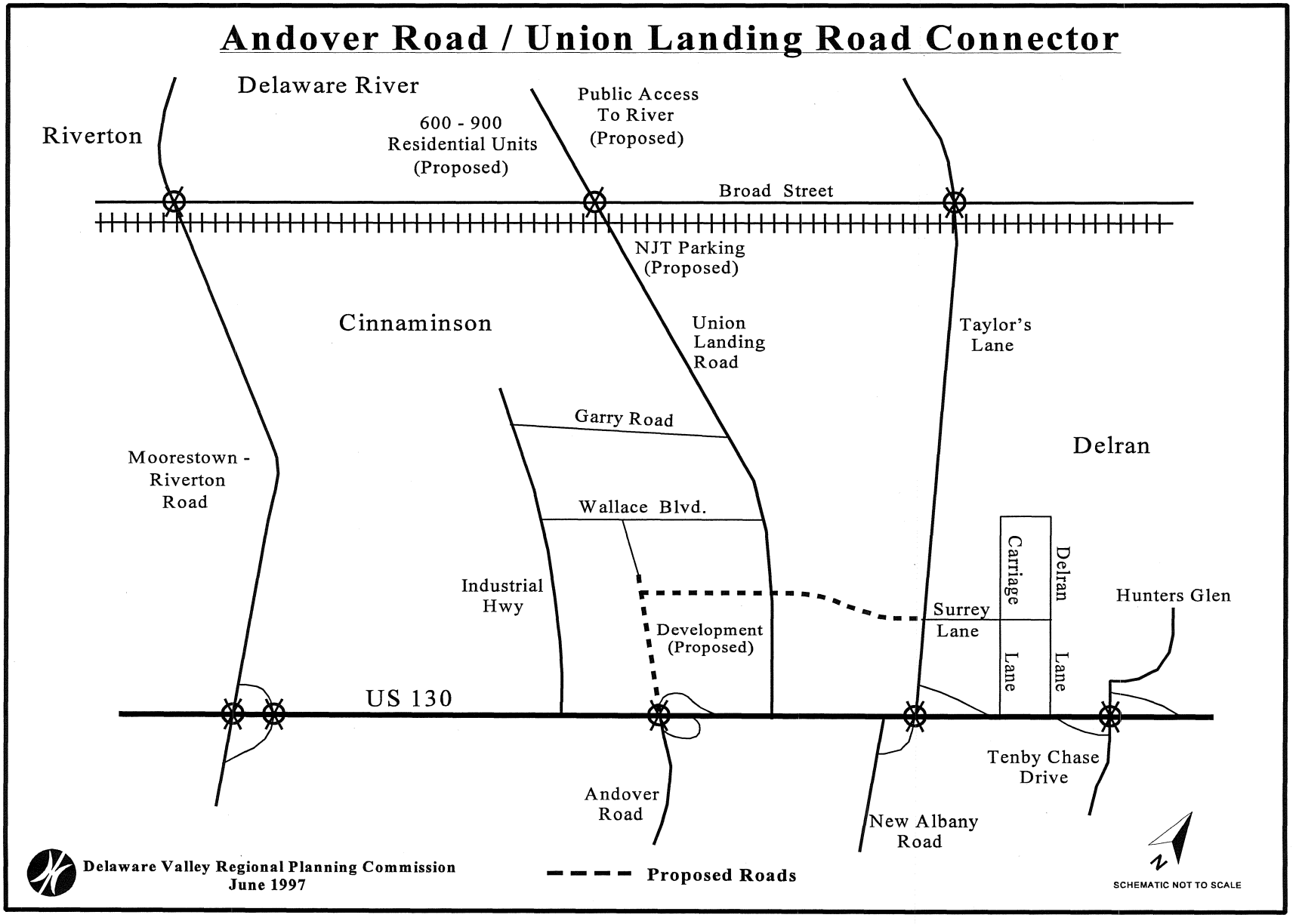

US 130 & Andover Road
Cinnaminson Township
25'
OFFICES
12'
13'
15'
115'
15'
35'
Andover Rd.
Pool Service & Supplies
US 130
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

FIGURE 42


Andover Road / Union Landing Road Connector
Delaware River
Riverton
600 - 900
Residential Units
(Proposed)
Public Access
To River
(Proposed)
Broad Street
NJT Parking
(Proposed)
Cinnaminson
Union
Landing
Road
Taylor's
Lane
Garry Road
Delran
Moorestown -
Riverton
Road
Wallace Blvd.
Industrial
Hwy
Development
(Proposed)
Surrey
Lane
Carriage
Lane
Delran
Lane
Hunters Glen
US 130
Tenby Chase
Drive
Andover
Road
New Albany
Road
Delaware Valley Regional Planning Commission
June 1997
Proposed Roads
N
SCHEMATIC NOT TO SCALE

39. US 130: FROM ANDOVER ROAD TO TAYLOR'S LANE MILE POST: 38.1 TO 38.4
Cinnaminson Township

Existing Conditions:

Andover Road and Taylor's Lane intersect US 130 approximately 1,900 feet apart. Andover Road intersects US 130 on the east side and does not cross over the highway. Southbound left turns from US 130 are accommodated by a near side jughandle. There is a business located within the jughandle but there is no driveway access from the business to the jughandle. The land adjacent to the jughandle to the west is undeveloped and is part of an industrial park. Currently, there is no direct connection between US 130 or the jughandle and this adjacent industrial property. The industrial park does have access to US 130 via Union Landing Road or Industrial Highway. In the northbound direction, there is a reverse jughandle to serve U-turns. The Andover Road leg of the intersection, considered extremely wide, consists of two 15-foot approach lanes and a 35-foot departure lane. Andover Road serves as the main access to a residential neighborhood and is not a through road for mobility across the township. Operations at the intersection are controlled by a traffic signal.

Taylor's Lane actually intersects US 130 at a disjointed intersection with New Albany Road. Taylor's Lane intersects US 130 on the southbound side and New Albany Road comes into the northbound side. Southbound turns from US 130 are accommodated by a near side jughandle. New Albany Road acts as a near side jughandle for northbound turns from US 130. There are two businesses located within this jughandle with driveways onto both US 130 and the jughandle. New Albany Road carries three lanes into this signalized intersection and permits two lanes to carry through traffic across US 130 onto Taylor's Lane. The departure lane on Taylor's Lane is 24 feet wide although it is not stripped to accept two lanes of traffic. Taylor's Lane carries two approach lanes into the intersection. The proximity of the adjacent pool and garden store and its parking area creates a tight turning radius for right turns onto southbound US 130. Taylor's Lane provides direct access to River Road (CR 543) and an industrial park.

Approximately halfway between Andover Road and Taylor's Lane, Union Landing Road intersects US 130 along the southbound side. This is a three-leg unsignalized intersection which does not have access to or from the northbound side. This road provides direct access to River Road (CR 543) and an industrial park. The significance of this road to mobility in Cinnaminson is expected to increase dramatically with the proposed projects which are slated in its vicinity. New Jersey Transit is evaluating a park and ride site along its proposed light rail transit line

adjacent to Union Landing Road. At the foot of Union Landing Road where it intersects with River Road, a proposed residential development could bring as many as 600 to 900 units. On a site adjacent to the residential development, the township is seeking to provide a public access site to the Delaware River. Possibly the biggest impact could come from the parcel located south of Union Landing Road and west of US 130, where the township has entered discussions with a potential developer of a major retail establishment which could bring significant amounts of traffic onto Union Landing Road.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 3,300 vehicles on Union Landing Road.

Identified Problems:

- The intersection of US 130 and Taylor's Lane experiences significant congestion. The truck traffic generated by the industrial park is a major contributor to the congested conditions at the intersection with US 130.
- The disjointed nature of the Taylor's Road and New Albany Road intersection in combination with the businesses located within and adjacent to the jughandle inhibits the smooth flow of traffic through the intersection.
- The existing configuration of Union Landing Road and its limited access to US 130 will not adequately accommodate the demand placed on it by the several proposed projects in its vicinity.
- Access to the industrial area west of US 130 and its internal circulation is limited by the lack of a connection between Taylor's Lane and Union Landing Road.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A10 (US 130 Highway Frontage - Delran and Cinnaminson Townships).

Short Term

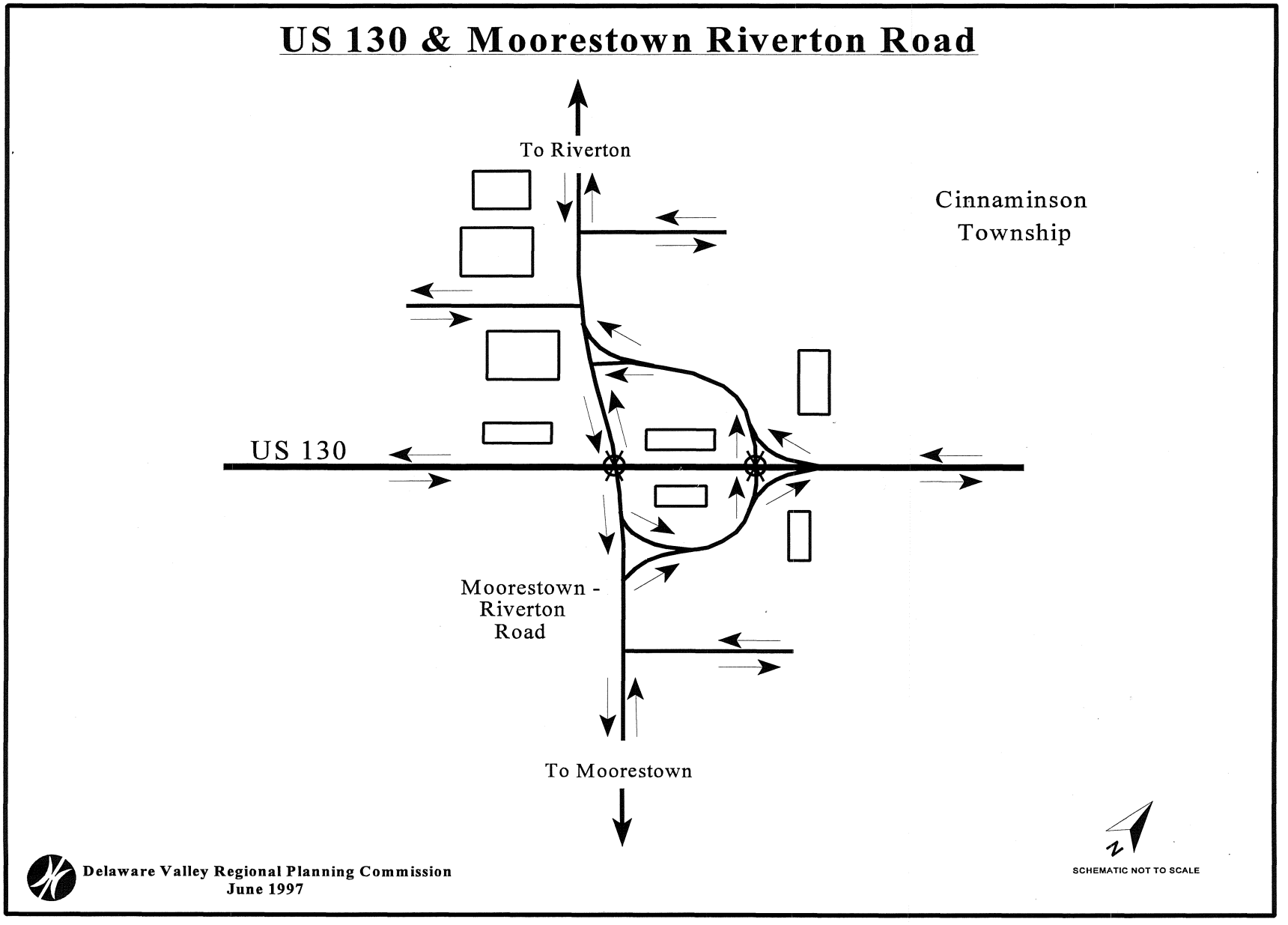
- An unique opportunity exists to provide some of the local connector roads which will improve the mobility within Cinnaminson, improve access for the existing businesses and make undeveloped parcels more attractive to development. The township, county and NJ DOT should work with the potential developer of the parcel south of Union Landing Road to discuss the inclusion of a new connector road into the design of the site. The concept is to provide a connection between Union Landing Road and the existing jughandle at Andover Road. Access from this connector should also be provided to Main Line Drive (an existing cul-de-sac street within the industrial park). The connector should also be extended from

Union Landing Road to Taylor's Lane to tie in with Surrey Lane (an existing street within the industrial park). The primary benefits of this concept include: 1) direct access to/from the new retail establishment into US 130 at an existing signalized intersection which provides all movements north and south on US 130, 2) improved access between Union Landing Road and US 130, 3) create a new access between Main Line Drive and US 130, 4) reduced congestion at the US 130 and Taylor's Lane intersection, especially truck related, since there will be better access into the industrial park and 5) increased mobility for township residents.

Long Term

- As the significance of Union Landing Road increases due to those proposed projects identified above, it should be upgraded to AASHTO standards (a 12-foot travel lane and an eight-foot shoulder in each direction). The township should look to NJ Transit and the other developers locating along Union Landing Road for assistance in this improvement. The county should also consider taking ownership of the road at that time because of its relationship within the county network, connection to the state highway network and its function of providing access to trips that are more regional than local in nature.

FIGURE 43


US 130 & Moorestown Riverton Road
To Riverton
Cinnaminson Township
US 130
Moorestown - Riverton Road
To Moorestown
Delaware Valley Regional Planning Commission
June 1997
SCHEMATIC NOT TO SCALE

40. US 130 AND MOORESTOWN RIVERTON ROAD (CR 603) MILE POST: 37.1
Cinnaminson Township

Existing Conditions:

Moorestown Riverton Road intersects US 130 at two interconnected signalized intersections which are approximately 225 feet apart. This location actually operates similar to a traffic circle since the westbound through traffic on Moorestown Riverton Road must use the two jughandle legs to get through the intersection. Turning movements through the intersection are confusing and are replete with conflicts from the driveway accesses on the jughandles. Each jughandle has three driveway openings to serve the adjacent businesses. A pedestrian overpass is provided just south of the southern intersection.

Traffic on southbound US 130 attempting to turn onto Moorestown Riverton Road must bear right at the northern intersection onto a near side jughandle. Traffic headed towards Riverton will then bear right at a yield controlled intersection onto Moorestown Riverton Road. Once on the near side jughandle, traffic headed towards Moorestown will turn left from a stop controlled intersection across oncoming traffic onto Moorestown Riverton Road. Vehicles will then cross US 130 at the southern intersection and proceed on a one-directional segment of Moorestown Riverton Road before joining the two-directional segment.

Traffic on northbound US 130 attempting to turn onto Moorestown Riverton Road must turn right at the southern intersection onto what is essentially a far side jughandle. Traffic headed towards Moorestown will continue straight and join the two-directional segment of Moorestown Riverton Road. After turning right at the southern intersection, traffic headed towards Riverton will bear left at a yield controlled intersection onto a one-directional approach to US 130. Vehicles will then cross US 130 at the northern intersection and proceed on the US 130 southbound near side jughandle before bearing right at a yield controlled intersection onto Moorestown Riverton Road.

US 130 carries three travel lanes plus shoulders in each direction through these intersections and is separated by a concrete median barrier. The Moorestown Riverton Road approach at the northern intersection consists of a left turn lane, a through lane and a channelized right turn lane. The right turn lane is so short that access to it gets blocked off if more than three vehicles are queued up in the through lane. The Moorestown Riverton Road approach at the southern intersection is configured the same way, however a departure lane from US 130 makes this a

two-directional leg. This departure lane serves traffic exiting from the gas station located within the southbound jughandle and the adjacent gas station located south of Moorestown Riverton Road. The gas station located within the southbound jughandle also has a driveway access to the jughandle.

Manor Road, a local street, intersects Moorestown Riverton Road approximately 75 feet west of where the southbound jughandle intersects Moorestown Riverton Road. Vehicles turning into or out of Manor Road create conflicts with vehicles turning right from the jughandle.

Another important issue that needs to be addressed concerns the adjacent shopping center which formerly housed the Clover department store. Although this shopping center is mostly vacant at this time, the township is actively working with a major supermarket chain to locate a store on this site. The shopping center currently has an unsignalized right-in right-out driveway and another out only driveway onto US 130. In addition to those driveways, in and out access is currently provided on Moorestown Riverton Road approximately 400 feet from the intersection of the southbound jughandle. There has been discussion between the township and the developer concerning installation of a traffic signal at the Moorestown Riverton Road entrance/exit to the shopping center.

A traffic count conducted by DVRPC in 1995 indicated an AADT of approximately 8,900 vehicles on Moorestown Riverton Road west of the high school.

Identified Problems:

- Congestion and safety problems exist at these intersections because of the following factors: 1) the disjointed nature of the intersection causes westbound through traffic to circumvent the intersection on the jughandles, 2) the proximity of the two signals causes vehicles to get trapped on US 130 between the signals and adds to the back-ups when left turns from the side streets are released into this area, 3) driveway access to the jughandles causes conflicts for vehicles proceeding through the intersections, 4) two-way traffic on the western leg of the southern intersection creates conflicts with traffic using the southbound jughandle and limits the eastbound approach to two lanes.
- The sight distance for vehicles on the southbound jughandle is somewhat constrained by adjacent vegetation and buildings. In addition, the distractions caused by conflicts between the jughandle and Manor Road as well as the proximity of the shopping center driveway to the jughandle raises questions as to the effectiveness of installing a traffic signal at the shopping center driveway.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A10 (US 130 Highway Frontage - Delran and Cinnaminson Townships).

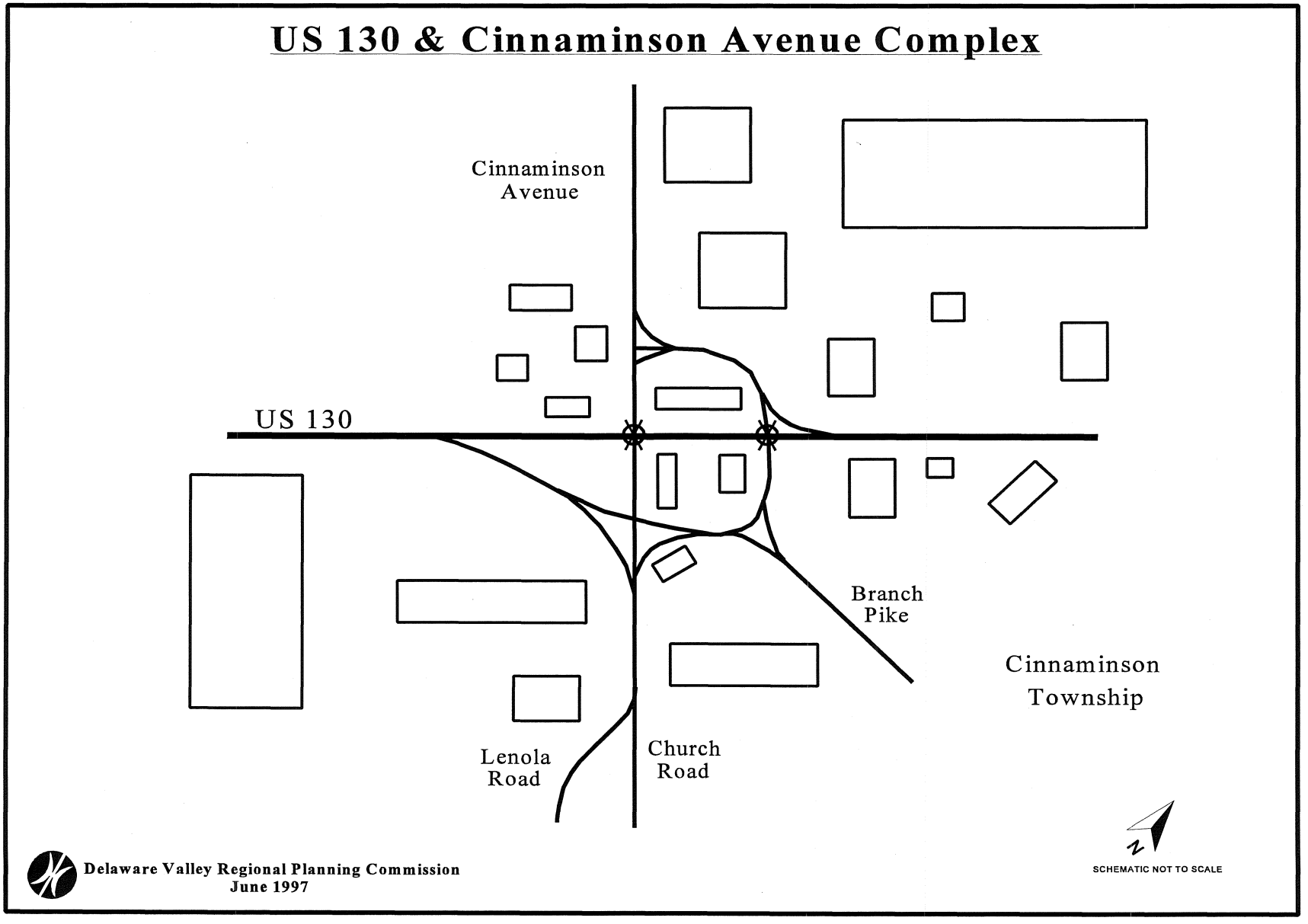
Short Term

- The Township should request that NJ DOT investigate changing eastbound Moorestown Riverton Road to one-way approaching US 130 between the southbound jughandle and US 130. This leg of the intersection can then be converted to a three lane approach consisting of a left turn lane, a shared through and left turn lane and a full right turn lane. Westbound traffic from the gas station inside the jughandle would use the existing driveway onto the jughandle. Left turns from the gas station south of Moorestown Riverton Road would be eliminated. This eliminates a conflict for traffic coming off the US 130 southbound jughandle and eliminates a potential safety problem when traffic from this gas station tried to turn left across the two lanes of eastbound traffic on the eastbound Moorestown Riverton Road approach.
- The township should evaluate the impacts of installing a traffic signal at the shopping center driveway onto Moorestown Riverton Road, paying special attention to how its queues would impact the US 130 southbound jughandle, Manor Road and the driveway access to the existing land uses (bank, municipal building, library and police station).

Long Term

- NJ DOT and the county should investigate the potential for reconstructing the intersection to allow a continuous through movement across US 130 on Moorestown Riverton Road. Reconfigure the northbound jughandle to operate as a reverse jughandle. Reexamine the businesses access to these jughandles to see if there is a way of combining access with adjacent businesses. This scenario may necessitate shifting the roadway slightly to the north of its current alignment which would require the acquisition of the business located within the jughandles.

FIGURE 44


US 130 & Cinnaminson Avenue Complex
Cinnaminson Avenue
US 130
Branch Pike
Cinnaminson Township
Lenola Road
Church Road
Delaware Valley Regional Planning Commission
June 1997
SCHEMATIC NOT TO SCALE

41. US 130 AND CINNAMINSON AVENUE (CR 607) COMPLEX MILE POST: 36.0
Cinnaminson Township

Existing Conditions:

The Cinnaminson Avenue Complex is actually the convergence of three roads east of US 130 and one road from the western side of US 130 into one location. On the eastern side, Lenola Road (CR 608) merges into Church Road (CR 607) which joins with Branch Pike (CR 606) just before US 130. Cinnaminson Avenue (CR 607) intersects US 130 on the western side. These facilities merge together to form two interconnected signalized intersections along US 130 which are approximately 375 feet apart. The operation of this location is actually similar to that of a traffic circle. US 130 carries three travel lanes in each direction through this location and is separated by a concrete median barrier. All turns from US 130 are accommodated through jughandles where they must mix with the traffic from the side streets. Compounding the complexity of this location is the intense retail development in the immediate vicinity including those located within the jughandle.

1995 traffic counts conducted by DVRPC indicated the following AADT's: 1) approximately 59,900 vehicles on US 130 between Cinnaminson Avenue and NJ 73, 2) approximately 8,300 on Cinnaminson Avenue, 3) approximately 9,300 on Lenola Road, 4) approximately 17,500 on Church Road and 5) approximately 4,000 on Branch Pike.

Identified Problems:

- Significant congestion is experienced particularly in the peak periods but can occur at intermittent times during the day.
- The number of roads involved at this location and the amount of traffic pushed through these intersections on a daily basis eliminate the possibility of realizing noticeable benefits through operational improvements such as signal retiming or lane designations.
- The proximity of the retail development generates significant traffic through the intersection and adds to the conflicts created by turning vehicles.

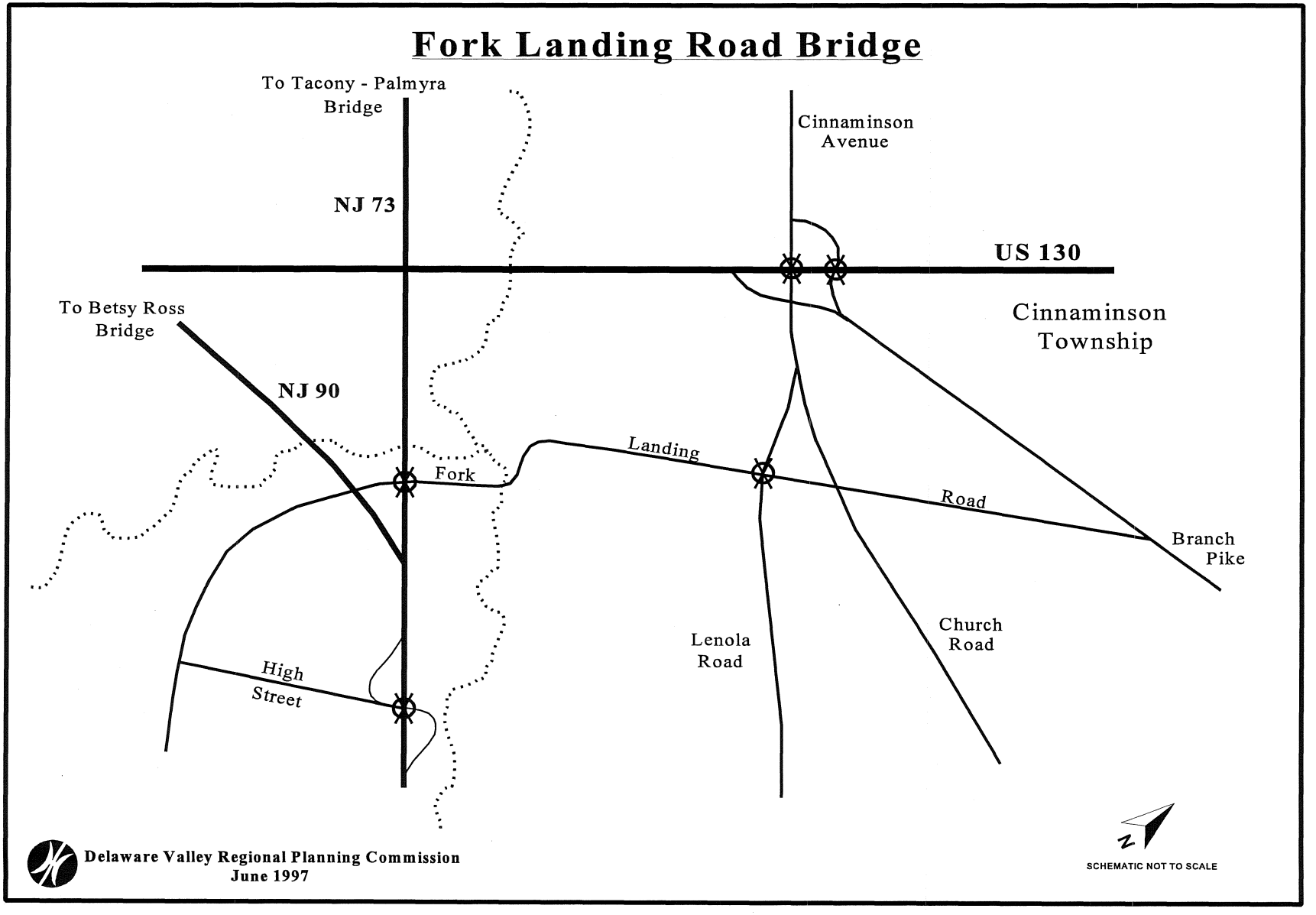
Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area A10 (US 130 Highway Frontage - Delran and Cinnaminson Townships).

Long Term

- The complexity of this location and its surrounding land uses require a comprehensive effort on the part of NJ DOT, the county and the township to study this area in significant detail and identify potential improvements. Improvement concepts should consider long range, far reaching solutions that not only look at the highway infrastructure but also the redevelopment potential of the land uses in the vicinity.

FIGURE 45


Fork Landing Road Bridge
To Tacony - Palmyra Bridge
NJ 73
Cinnaminson Avenue
US 130
To Betsy Ross Bridge
NJ 90
Cinnaminson Township
Landing
Fork
Road
Branch Pike
Church Road
Lenola Road
High Street
Delaware Valley Regional Planning Commission
June 1997
SCHEMATIC NOT TO SCALE

42. FORK LANDING ROAD OVER THE PENNSAUKEN CREEK

Cinnaminson Township

Existing Conditions:

Fork Landing Road, a municipal street, connects Lenola Road to NJ 73. In the vicinity of the Pennsauken Creek, the road is 23 feet wide on the north side of the creek and only 18 feet wide on the south side. There is no centerline stripping and there are no shoulders. The bridge, owned and maintained by the county, carries one lane over the creek and is 13 feet wide and 62 feet long. There is a weight restriction of 15 tons on the bridge. Even though this road experiences significant geometric constraints, it provides an important connection between southern Cinnaminson and NJ 73.

On the north side of the bridge, the road makes a sharp turn to the west and quickly makes a sharp turn back towards the north. Speed advisory signs are posted on the turns for 15 MPH. In this section there is a slight downgrade towards the creek. There is a house located adjacent to the road on the first curve north of the bridge. A seasonal produce stand is located on the second curve.

On the south side of the bridge, wetlands abut both sides of the road. The northbound NJ 73 near side jughandle intersects Fork Landing Road on a curve approximately 600 feet from the bridge. There are a few homes located relatively close to Fork Landing Road in the vicinity of this curve.

Identified Problems:

- The substandard geometrics of the road create safety problems.
- The weight restriction and narrowness of the bridge restricts mobility through this area.
- During rain storms, flooding frequently occurs on the road to the south of the bridge.
- A seasonal produce stand located on the second curve north of the bridge creates a safety problem due to the following factors: 1) the sharp curve and adjacent vegetation severely restricts sight distance, 2) customers park on the edge of the road in both directions and 3) there are many pedestrians crossing the road at this location to get from their vehicles to the produce stand.

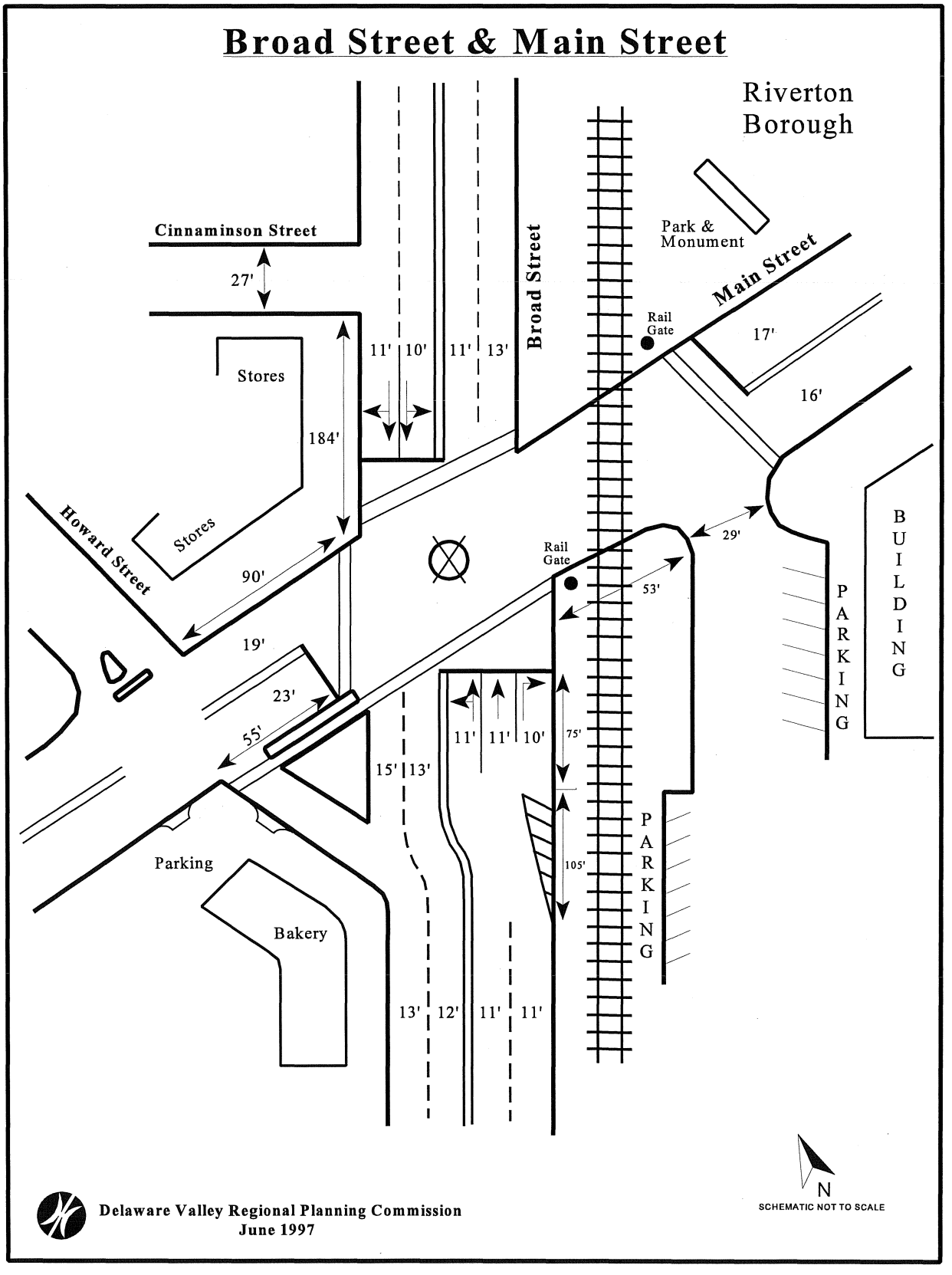
Potential Improvement Scenarios:

The existing road and bridge structure can not safely and efficiently meet the needs of travel through this area. To adequately meet these needs, Fork Landing Road would need to be upgraded to standards, the curves would need to be eliminated and a new two-lane bridge should be constructed. Implementing those improvements at this location, although desirable, would be very problematic because of the associated environmental and social constraints. The adjacent wetlands, residences and business all present such significant hurdles that other options for serving this travel demand should be identified and evaluated. A study should be conducted which takes a macroscopic look at this problem and evaluates potential solutions.

Short Term

- One option is to evaluate the potential to make another connection between Lenola Road and NJ 73. Although similar types of environmental and social constraints would be involved, if their severity was greatly reduced it could make the option more attractive. A potential location that deserves at least some consideration would be to build a new road and bridge that would connect Lenola Road in the vicinity of Shenandoah Road to the NJ 73 northbound jughandle at the signalized intersection with High Street in Maple Shade. This connection would relieve the pressure on Fork Landing Road, provide a safe connection, and enhance the mobility of this area by providing access not only to NJ 73 but also NJ 90 and the Betsy Ross Bridge. However, legitimate concerns still exist: 1) construction of a new road on new alignment requires right of way acquisition, 2) this option still requires a stream crossing and encroachment on wetlands, 3) a business adjacent to the jughandle could potentially be impacted, 4) this new alignment would require coordination with Moorestown, Maple Shade and NJ DOT and 5) concerns of preventing increased traffic through the residential neighborhood on Shenandoah and/or Acadia Roads to reach Church Road.

FIGURE 46


Broad Street & Main Street
Riverton Borough
Cinnaminson Street
27'
Stores
184'
Howard Street
Stores
90'
19'
23'
55'
11' 10' 11' 13'
Broad Street
Park & Monument
Main Street
Rail Gate
17'
16'
Rail Gate
29'
53'
BUILDING
PARKING
11' 11' 10'
75'
15' 13'
105'
PARKING
Parking
Bakery
13' 12' 11' 11'
Delaware Valley Regional Planning Commission
June 1997
N
SCHEMATIC NOT TO SCALE

43. BROAD STREET (CR 543): FROM MARKET STREET TO MARTHA'S ROAD

Palmyra Borough and Riverton Borough

Existing Conditions:

Broad Street carries two travel lanes in each direction through Riverton. In Palmyra, the two travel lanes by direction are continued to Cinnaminson Avenue. South of Cinnaminson Avenue, the road drops to one travel lane by direction. The cartway is 47 feet wide south of Main Street in Riverton and 45 feet wide south of Weart Avenue in Palmyra. Although designated with a county route number, this road is owned and maintained by the Burlington County Bridge Commission.

The southern end of Broad Street intersects NJ 73 at a T-intersection. There is no median break on NJ 73 at this intersection and permitted movements are right-in and right-out only to/from Broad Street. North of Riverton, Broad Street continues its four lane alignment through the industrial areas of Cinnaminson and Delran. In addition to NJ 73, the major cross streets include Market Street/ Hylton Road, Cinnaminson Avenue and Main Street. The land use along the western side of Broad Street in primarily residential with retail concentrated around the signalized intersections of Cinnaminson Avenue and Main Street. Directly adjacent to Broad Street on the east is the Conrail tracks. NJ Transit is currently evaluating the potential for initiating light rail passenger service on this line.

There is no on-street parking along Broad Street in Riverton. However, angle parking is available on the southbound side of Broad Street in Palmyra between Morgan Avenue and the firehouse just north of Delaware Avenue. South of the firehouse, on-street parking is permitted to NJ 73. In the northbound direction, on-street parking is permitted from NJ 73 to Garfield Avenue.

The posted speed limit is 45 MPH in Cinnaminson for both directions . The speed limit is reduced to 35 MPH upon entering Riverton. South of Main Street, the speed limit is reduced again to 30 MPH in both directions. This speed limit stays in effect until Delaware Avenue in Palmyra. Between Delaware Avenue and NJ 73, the posted speed limit is 35 MPH.

Traffic counts conducted by DVRPC in 1995 indicated AADTs of approximately 7,900 vehicles on Broad Street in Palmyra and approximately 10,500 vehicles on Broad Street near Taylor's Lane in Cinnaminson.

Identified Problems:

- At the root of the problems for this section of Broad Street, is the current function of the road. Its design as a four lane road and its convenient connections to NJ 73 on the south and the employment opportunities in Cinnaminson and Delran's industrial sites to the north, makes this a prime candidate for through traffic. However, this is not totally consistent with the nature of the adjacent land uses; single family residential with pockets of small downtown commercial establishments.
- Travel speeds through this section of Broad Street are commonly seen as problematic because of the potential conflicts with pedestrians and local traffic.
- This facility experiences noticable truck traffic as it is used as a connection between NJ 73 and the industrial areas in Cinnaminson and Delran.
- The southbound Broad Street approach at Cinnaminson Avenue has recently been improved. This improvement provides a cross section which consists of a right turn lane, two through lanes and a left turn lane on the approach. This configuration creates a problem for southbound through traffic; the two through lanes merge to one lane as they cross the intersection. Compounding this problem, angle parking is permitted on the southbound side of Broad Street south of the intersection. southbound through traffic must consider the parking maneuvers while negotiating the merge to one lane.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Area B4 (Broad Street - Palmyra and Riverton Boroughs).

Short Term

- To address the problems associated with speeds, truck traffic and through trips, Riverton officials have suggested reducing the road from two travel lanes in each direction to one lane in each direction plus a two-way center left turn lane. They suggest that this could be done by restripping the existing cartway to provide the new configuration. A level of service (LOS) analysis of the existing configuration indicated that the intersection of Broad Street and Main Street currently operates at LOS B in both the AM and PM peak hour. A level of service (LOS) analysis was also performed for the modified configuration (one travel lane plus a center turn lane on the Broad Street approaches) using existing traffic volumes. This modified configuration also provides a LOS B operation.

  Although modifying the configuration produces no degradation in operations at the intersection, this configuration may not be desireable because it may actually work to increase

travel speeds and through traffic by increasing lane widths and removing lateral obstructions (other vehicles in adjacent lanes). A center turn lane removes turning vehicles from the travel lane providing unencumbered flow for through traffic. Because of the adjacent rail line, there are very few locations where a center left turn lane would be used by southbound vehicles. This creates a relatively open lane adjacent to the travel lane. Wider lanes and reduced obstructions near the edge of the travel lane reduces driver tension and frequently permits drivers to select shorter than normal headways and or higher speeds.

A configuration that may produce the intended benefits and could be done relatively quickly and inexpensively would be to provide one travel lane in each direction and permit on-street parking. The parking lane could be designated by an edge line which would put a physical limit on the travel lane. On-street parking is also consistent with the adjacent land uses (downtown commercial and residential). This configuration is consistent with the section of Broad Street in Palmyra south of Delaware Avenue. On-street parking should be prohibited in the vicinity of intersections which would allow the inclusion of a left turn lane on the approach if warranted. The current traffic volumes on Broad Street should be able to be accommodated by one travel lane in each direction plus left turn lanes at intersections.

- The problem of through trucks can also be addressed by signing alternate routes using US 130. Improving the connections between the industrial areas and US 130 should also work to encourage truck traffic away from Broad Street.

Long Term

- Another option that was suggested would be to provide one travel lane in each direction and a landscaped median. Within the existing cartway, the remaining available area could potentially be used for on-street parking or a bike lane.

Riverton and Palmyra should work with the county and the Burlington County Bridge Commission to determine the most appropriate and acceptable configuration based on several factors: the needs of the municipalities, the mobility of the users of this facility, the provision of a safe and efficient roadway and the desire for a uniform cross section. The most important point is that there are several options available for addressing the issues of traffic flow on Broad Street. Many locations are not fortunate enough to have so many opportunities. The bottom line is that the stakeholders must first come to some agreement on how this road should function and then cooperatively select the appropriate design.

44. NJ 73 AND BROAD STREET MILE POST: 33.4
Palmyra Borough

Existing Conditions:

NJ 73 carries two travel lanes in each direction in this vicinity and is divided by a concrete median barrier. Broad Street carries one travel lane in each direction in the vicinity of NJ 73. The intersection with Broad Street is a three-leg unsignalized intersection with right-in/right-out access only.

Immediately adjacent to the intersection on the east side of Broad Street, is the bridge which carries the Conrail freight line over NJ 73. The bridge abutment is located directly adjacent to northbound NJ 73 and allows no room for a deceleration lane for right turns onto Broad Street. On the northwest corner is a grass field which sits adjacent to the parking lot for a liquor store. The driveway from NJ 73 to the liquor store is located approximately 175 feet west of Broad Street. The speed limit on NJ 73 is posted at 45 MPH. The posted speed limit on Broad Street is 35 MPH.

A cloverleaf interchange between NJ 73 and River Road (CR 534), located approximately 1,000 feet south of Broad Street does not provide a northbound NJ 73 off ramp for access into Palmyra. However, approximately 300 feet north of the interchange a right-in/right-out intersection exists with Spring Garden Street. The Broad Street intersection represents a key access point into Palmyra from northbound NJ 73. Broad Street is the principal north-south road through Palmyra and provides direct access to the downtown business district. North of the Broad Street intersection, Fifth Street, Jefferson Street and Madison Street provide right-in/right-out access between northbound NJ 73 and Palmyra. There is a median break and traffic signal at the Souder Street intersection with NJ 73. Traffic from the Tacony-Palmyra Bridge can gain access to the borough through this intersection but left turns are not permitted from Souder Steeet on to southbound NJ 73.

Identified Problems:

- Although there are several locations to turn from northbound NJ 73 into Palmyra, the most direct access to the center of town has potentially the worst problem. The proximity of the Conrail bridge to Broad Street eliminates the possibility of a deceleration lane for northbound right turns. High speeds on northbound NJ 73 increases the possibility of a rear end collision at this intersection. The bridge abutment also restricts sight distance for vehicles attempting

to turn right from Broad Street on to northbound NJ 73.

Potential Improvement Scenarios:

Improvements at this location will address challenges identified by the county in Target Areas A11 (NJ 73 Frontage and Link to Tacony-Palmyra Bridge - Palmyra Borough) and B4 (Broad Street - Palmyra and Riverton Boroughs).

There are several options which should be evaluated to determine their effectiveness to improve the access from northbound NJ 73 into Palmyra. These fall into short term and long term scenarios.

Short Term

- Encourage access to Spring Garden Street through signing and prohibiting right turns onto Broad Street from northbound NJ 73. Spring Garden Street would have to be upgraded and the county should consider taking over the two block section between NJ 73 and Hylton Road.
- Increase the radius for right turns from Broad Street onto NJ 73 by cutting back the corner to provide better sight distance and an acceleration lane.

Long Term

- Realign Broad Street to the north through the adjacent field; this would shift the intersection away from the rail line and potentially allow for a deceleration lane.
- Replace the Conrail Bridge over NJ 73 and move the abutment back away from the edge of the road. This is an expensive proposition but there are other issues that could impact this scenario. If the old drive-in movie were ever redeveloped into an industrial park a spur from the rail line could be a possibility and a new bridge may be required. The other issue in the equation is the potential light rail transit service being proposed for this line.
- Construct a northbound off ramp from NJ 73 onto River Road. The key issues that would need to be addressed with this option is the proximity of the NJ 73 bridge over the Pennsauken Creek, the viability of the land on that quadrant of the interchange to support a road and the high cost in relation to the benefits.

DVRPC'S LONG RANGE PLAN AND FY 1998 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM US 130 CORRIDOR PROJECTS

T1 *Traffic Signal Contract 16: NJ 30, NJ 38, NJ 70 and NJ 73, TIP # 0014A,*- within the study corridor, this project is located in Palmyra and Cinnaminson and calls for the implementation of a computerized traffic signal system. Scheduled for construction in 2002.

T2 *US 206: Old York Road and Rising Sun Road, I-295 to NJ 68, TIP # 1231,* -This project is located in Bordentown Twp. and includes the construction of a new connector road between Rising Sun Road and US 206 and pavement rehabilitation on Old York Road and Rising Sun Road to accommodate heavy traffic between I-295 and Interchange 7 of the NJ Turnpike. Scheduled for design in 1998, right-of-way acquisition in 1999 and construction in 2001.

T3 *Creek Road (CR 636): CR 613 to Moorestown Centerton Road, TIP # 1296,* - within the study
L2 corridor, this project is located in Delran and calls for the reconstruction of the existing roadway from 20 feet to 40 feet including two 8-foot shoulders and auxiliary lanes at intersections. Scheduled for design in 1998.

T4 *Burlington County Computerized Signal Control, Phase III, TIP # 1322,* - this traffic-responsive, coordinated signal system project consists of 13 intersections in Willingboro; 12 on Beverly Rancocas Road (CR 626) and 1 on Woodlane Road (CR 630) as well as two school flashers. Scheduled for final design and construction in 1999.

T5 *Southern New Jersey Light Rail Transit, TIP # N035* - This project represents the section of
L1 the line between Camden and Trenton and is being implemented as a turnkey project to accelerate construction and reduce overall costs. This funding provides for initial reimbursement to the design, build, operate and maintain (DBOM) contractor for final design, property acquisition and initial construction activities once the project receives environmental clearance. This facility runs through the following Burlington County municipalities Palmyra, Riverton, Cinnaminson, Delran, Riverside, Delanco, Edgewater Park, Beverly, Burlington Township, Burlington City, Florence, Mansfield, Fieldsboro, Bordentown Township and Bordentown City.

L4 *Burlington City Transportation Center* - construction of a transportation center with a park and ride lot and passenger ammenities in the vicinity of Broad and High Streets in Burlington City.

PLAN IMPLEMENTATION

The *US 130 Corridor Study* can be used as a dynamic long range tool for the systematic selection of projects to create a significantly improved transportation system within the corridor. This document can serve as a *punch list* for the government agencies with a stake in the implementation of improvements. Municipal governments are key players in this process. Even though a highway may be maintained by the state or county, it is the welfare of the local residents which is affected the most. Safety and mobility benefits are felt more by those who use the highway frequently. Therefore, the local municipality should assure that the improvements are advanced expediently by being involved in the process no matter which agency has a lead role.

Characteristics

In choosing which projects should advance first, stakeholders can be guided by the information presented in Table 2 (page 174) *US 130 Corridor Transportation Problem Locations and Characteristics*. This easy to use matrix suggests the relative importance to stakeholders of the various attributes of each problem location. Each improvement scenario, identified as short term or long term is evaluated in terms of target area, SDRP Centers designation, project priority, cost range and project benefits. The stakeholders necessary to carry out the plan will also be identified.

The end of the matrix lists those projects in the corridor which are farther advanced through the planning process. These improvements have been identified as part of DVRPC's Long Range Plan (LRP) or are programmed for implementation on DVRPC's FY 1998 - 2002 Transportation Improvement Program (TIP). By listing those projects which are already part of the LRP and TIP, this improvement plan becomes as comprehensive as possible in identifying the transportation needs of the corridor.

Target Area

The *target area* refers to the county-identified areas in which there is a documented need to channel investments. The specific target areas have been addressed in an earlier section of this report. A detailed discussion of the target areas and the specific challenges they face are documented in associated work prepared by the county.

State Development and Redevelopment Plan (SDRP) Designated Centers

Centers are an important part of the State Plan's Resource Planning and Management Structure for

achieving the goals of the State Planning Act. The concept of Centers is the organizing planning principle for achieving a more effective and efficient pattern of development in New Jersey. Under the Goals, Strategies and Policies of the State Plan, new growth and development should be organized into compact development in the form of Centers surrounded by carefully controlled "environs" by way of municipal master plans and regulations and through public investment policy. Specifically, the SDRP defines a Center as " central places within Planning Areas where growth either should be attracted or not attracted, depending upon the unique characteristics and growth opportunities of each Center". The Plan identifies five types of Centers: 1) Urban Centers, 2) Towns, 3) Regional Centers, 4) Villages and 5) Hamlets. Those Centers located in the corridor fall under the category of Towns and include: Beverly, Bordentown City, Burlington City, Roebling and Riverside.

Priority

Priorities are estimated in terms of three categories: high, moderate and low. Priorities are assigned based on the perception of the extent of the problems they present drivers, with safety being most important, but congestion (or time delay) and mobility also being considered. A higher degree of priority is also assigned if there is an urgency to complete the improvement due to the immanent completion of a nearby major investment (development or transportation improvement). If there is concern that a section of right-of-way needed to complete an improvement is in danger of being developed or used for another use, the priority to act on that improvement is also heightened. If a project is relatively small scale and low cost, yet offers a projected high benefit, it also receives a higher priority ranking.

Cost Range

Costs are also assigned to categories of high, moderate and low. High cost projects usually involve a major commitment from one or more funding source, lengthy public involvement and several years delay in programming the required funds. They are typically large scale, complex or multi-phased improvements and can entail the construction of new facilities. In general, a project in this category is estimated to cost between $5 and $35 million, however some major projects have been known to cost in the hundreds of millions of dollars. An improvement estimated to have a moderate cost could involve a major reconstruction of an intersection, construction of a short connector road or a widening of an existing road. In general, a project in this category is estimated to cost between $2 and $5 million. Low cost projects can often be fast-tracked with maintenance, or pool funding. They are often operational type improvements at isolated locations and typically cost less than $1 million. These cost ranges are generalized estimates and could be significantly changed for a specific location due to environmental, right-of-way or other factors uncovered during detailed design of the

improvement. Overall, this corridor improvement plan has identified an estimated $300 million worth of highway improvements and another $450 million worth of transit improvements.

Benefits

Benefits describe the kind of impact the improvement will yield, such as enhancing safety, lessening congestion, improving mobility or encouraging economic development. Economic development benefits are derived from a transportation improvement generally through an increase in the accessability of affected individual properties or areas. The strategic location and magnitude of the improvement determines the extent of the benefits received by the affected properties. The increased level of access to a property may make it attractive enough to induce new commercial or residential development or entice existing land uses to expand. Increased accessability can also have a positive effect on property values.

Roles of Agencies

In terms of a hierarchy of agencies, the New Jersey Department of Transportation (NJDOT) is primary, both in terms of maintaining US 130 and providing much of the design, right-of-way and construction funding for major improvements. Local government, both county and municipal, have input on land use in the corridor, which ultimately affect traffic levels on US 130. In addition, many of the cross streets are designed and built by local government, and these also impact how well US 130 functions. Lastly, developers actually build the housing, commercial and industrial projects which generate the trips which must be accommodated by a publicly-owned transportation infrastructure. In addition, some the transportation improvements themselves are designed and financed by developers.

New Jersey Department of Transportation

NJDOT has jurisdiction over the state highways in the corridor. In addition to US 130 these include: I-295, US 206, and NJ 73. Improvements to these highways are typically financed by state and/or federal funds. Occasionally, developer contributions are also a source of funding if the project has special impact by a development. The State ultimately makes the decision on what improvements are done to their facilities but often coordinates with the county or local municipalities when the improvements include facilities under their jurisdiction.

Burlington County

The county has jurisdiction over a network of roads throughout the whole county. In New Jersey, county roads are given 500, 600 or 700 route designations. The 500 series of county roads are

typically part of a statewide network of interconnected county routes; therefore 500 series routes are generally more significant than the other county roads. There are several 500 series routes within the corridor: CR 528, CR 541, CR 543 and CR 545. Most of the county roads in the corridor serve as access roads into or across US 130. The primary function of the county network is to serve medium range trips or to serve as feeders to the state system. Improvements to county roads are financed by county dollars or where eligible can they can receive federal or state funding. The county has the ultimate decision concerning improvements on county roads but typically coordinates with the municipality in which the improvement is located.

Metropolitan Planning Organization (MPO)

DVRPC, serving as the MPO for this region, is required to coordinate a comprehensive and continuing transportation planning process. This process results in the development of a Transportation Improvement Program (TIP) which identifies all priority projects for which federal funds will be sought. The TIP represents a consensus among state and regional officials as to what regional improvements are to be made. In addition to the TIP, the MPO is required by federal legislation to develop a long rang plan (LRP) to help direct region-wide transportation decision making over a period of at least 20 years. Long range plans do not specify the design of actual projects. Rather, they identify future needs to address transportation deficiencies.

Municipalities

Local governments not only have jurisdiction over their local road system they also control local land use decisions. The decisions made at the local level can effect the traffic on roads at all levels. Therefore, local officials must understand the traffic impacts which could be generated from a particular development and understand the synergy that exists between land use decisions and transportation improvements. Local officials need to be involved in the transportation planning process for all levels of transportation improvements to make sure that the concerns of their residents are addressed and to assist in the problem identification and improvement recommendations. Municipal officials need to make use of the circulation element of their Master Plan to identify important missing links in their highway network and begin to preserve space for these links to be built. The Master Plan is an important tool for municipalities to use in addressing their circulation needs.

Developers

As properties are developed or redeveloped, the transportation needs of the properties can change, sometimes drastically. Providing proper transportation access to a new development is often critical

to the success of that development. Therefore, developers must work with the transportation providers to assure that the necessary changes are beneficial to both the development and the existing transportation infrastructure. Developers frequently design and construct improvements for traffic attributable to their developments or to provide enhanced access to their site.

Investment Strategies

In order to achieve the goals and objectives of the overall Corridor planning effort, specific activities have been identified which will address specific investment strategies. In addition to those activities, the potential improvement scenarios developed through this study process which address specific investment strategies are presented below.

I. Safety/Functionality of the road network
   A. Provide safer travel conditions and improve the operations of the roadways by correcting deficiencies or substandard designs
      1. Location No. 1, 3, 9, 12, 14, 18, 19, 20, 26, 27, 44 - improves sight distance, signing and markings
      2. Location No. 10, 16, 21, 22, 23, 25, 28, 30, 32, 33, 34, 35, 36, T1, T4 - improves roadway design, removes turning vehicles from travel lanes, installs traffic signals or upgrades traffic signal timing

II. Economic Development
   A. Help create new economic nodes of activity
      1. Location No. 4 - improves access to Roebling superfund site from US 130 and a proposed light rail stop helps facilitate commercial/industrial development
      2. Location No.5 - improves access between US 130 and I-295, serving planned Food Distribution Center and planned industrial/commercial development in surrounding area
      3. Location No. 8 - provides access and road network to create industrial/commercial center along both sides of US 130 in Florence and Burlington Townships
      4. Location No.10 - provides access from US 130 to Burlington Island, a planned recreational facility
      5. Location No. 37 - realigns Hartford Road with Fairview Street at US 130 to help create a commercial center in Delran and improves access to downtown Riverside where a light rail stop is proposed

6. Location No.39 - realigns Union Landing Road with Andover Road at US 130 to help create a commercial center in Cinnaminson and improves access to the industrial area of Cinnaminson and Delran and the proposed light rail stop with smaller commercial component

B. Help improve existing economic activity

1. Location No. 15 - facilitates intermunicipal traffic to and from US 130 commercial and industrial areas in Burlington Township and the Rancocas Hospital with its planned expansion in Willingboro and Burlington Townships
2. Location No. 20 - improves safety to create a friendlier environment for patronizing Beverly's business district
3. Location No. 21 - creates reverse frontage road system in Edgewater Park providing alternate access to commercial establishments along US 130 and creating alternate inter and intra municipal linkages
4. Location Nos. 22, 24, 31 and 32 - improves ease, convenience and safety of cross corridor movements to encourage patronage of commercial activity along both sides of US 130 in Willingboro and Edgewater Park
5. Location No. 25 - improves traffic control and aesthetics of Cooper Street to help solidify the formation of a town center in Edgewater Park
6. Location Nos. 28 and 29 -creates a collector road through existing industrial areas in Delanco, facilitating safe and efficient truck movements from the waterfront to US 130
7. Location No. 36 - improves convenience and safety of US 130 to create a friendlier environment for patronizing commercial establishments along the highway in Delran
8. Location Nos. 37, 38, 39, 40 and 41 - improves ease, convenience and safety of cross corridor movements to encourage patronage of commercial activity along US 130 in Delran and Cinnaminson

C. Increase potential patronage of traditional downtown areas

1. The proposed LRT system will bring more potential patrons to traditional downtown areas of the following communities: Palmyra, Riverton, Riverside, Beverly, Burlington City, Roebling and Bordentown City

D. Provide adequate mass transit service to access jobs and purveyors of goods and services

1. Provide LRT service, shuttle/circulator service and reroute existing bus service to under served areas, linking the LRT, Employment Areas (Cinnaminson and Delran industrial areas, Delanco industrial area, Edgewater Park and Beverly industrial area, Burlington County industrial area, and Burlington/Florence Townships industrial area) and Commercial Areas (traditional downtowns and shopping centers along US 130).

E. Improve movement of freight via highway and rail

1. Capitalize on opportunities to create more industrial development which utilizes both modes of transportation in the following areas of the corridor: Palmyra - southwest of NJ 73, Cinnaminson - Union Landing Road and Taylor's Lane area, Riverside - between the railroad and Pavilion Avenue, Delanco - south of the railroad and a small area between the river and the railroad, Edgewater Park - along the railroad towards US 130, Beverly - along the railroad, Burlington City - south of Keim Blvd. between the railroad and the river, and Burlington and Florence Townships - northeast of Burlington City from both sides of US 130 to the river and the New Jersey Turnpike Extension.

F. Help strengthen corridor and regional tourist trade

1. Provide better highway and transit access to and from the following attractions and points of interest: Palmyra Cove Nature Preserve, Riverton historic district and bed-and-breakfasts, proposed Cinnaminson waterfront park, Taylor Preserve in Cinnaminson, Delran harbor district, proposed open-air market in Riverside, proposed Hawk Island Nature Preserve in Delanco, proposed Beverly waterfront park, Burlington City waterfront park, proposed Burlington Island recreation/hotel/conference center, Florence waterfront park, historic Roebling, River Heritage Trail proposed by the National Park Service.

2. Connect the Corridor with the following regional attractions via LRT service: Sony Entertainment Center, NJ State Aquarium, Trenton Thunder Stadium, Trenton State Capital, Center City Philadelphia, proposed professional farm-team hockey arena in Trenton.

TABLE 2

US 130 Corridor Transportation Problem Locations and Characteristics[1]

	Location	Target Area	SDRP Center	Priority	Cost Range	Benefits	Lead Role	Assisting Role
1	US 130 and Highbridge Road (Bordentown Township)	C1						
	short term improvements			M	L	Safe	Twp	DOT
	long term improvements			M	M	Safe,Mobl,ED	Twp	Dev,DOT
2	US 130 and Farnsworth Ave (Bordentown Township)	C1						
	short term improvements			M	M	Mobl	DOT	Twp, Co
	long term improvements			L	L	Cong	DOT	Twp, Co
3	US 130 and Burlington Street (Bordentown Township)	C1						
	long term improvements			M	M	Safe,ED	Twp	Co, DOT, Dev
4	US 130 and Hornberger Ave (Florence Township)	A1	X					
	short term improvements			H	M	Mobl,Cong	Twp	DOT, NJT
	long term improvements			H	H	Mobl,Cong,ED	Twp	DOT
5	US 130 and Florence Columbus Rd (Florence Township)	A2						
	short term improvements			H	M	Mobl,Cong	NJTPK	DOT, Co
6	Florence Columbus Rd: US 130 to I-295 (Florence Township)	A2						
	short term improvements			H	M	Mobl,Cong	Co	NJTPK
	long term improvements			M	H	Mobl,Cong	Co	NJTPK
7	US 130 and Florence Bustleton Rd / Cedar La (Florence Township)	A2						
	short term improvements			H	M	Mobl,Cong	NJTPK	DOT, Co

1 See Key to table on Page 180

US 130 Corridor Transportation Problem Locations and Characteristics[1]

Location		*Target Area*	*SDRP Center*	*Priority*	*Cost Range*	*Benefits*	*Lead Role*	*Assisting Role*
8	US 130 and Florence Industrial Area (Florence Township)	A2						
	long term improvements			M	M	Mobl,ED	Twp	Dev
9	River Road and Neck Road (Burlington Township)	A2						
	short term improvements			M	L	Safe,Mobl	Twp	Co
	long term improvements			L	L	Safe,Mobl	Co	Twp
10	US 130 and Columbus Road and Jones Road (Burlington City)	A4	X					
	short term improvements			M	L	Safe,Cong	DOT	City, Co
	long term improvements			M	H	Safe,Cong,Mobl,ED	City	DOT, Co
11	US 130 and Jacksonville Road/Federal Street (Burlington City)	A3	X					
	short term improvements			H	L	Cong,Safe	DOT	City, Co
12	Jacksonville Rd and Old York Rd (Burlington Township)							
	short term improvements			H	L	Safe	Co	Twp
13	Mt. Holly Av, Rancocas Rd, Fountain Av and 13th St (Burlington Township)							
	short term improvements							
	long term improvements			H	L	Cong	Co	Twp
				M	M	Cong,Mobl	Co	Twp,Dev
14	Salem Road: Mill Street to US 130 (Burlington Township)	A3						
	short term improvements			H	L	Safe	City	Twp,Dot,BCBC
	long term improvements			H	H	Safe,Mobl,Cong	Twp	Co,DOT
15	Campus Drive: From US 130 to Sunset Road (Burlington Township)	A3						
	short term improvements			H	M	Mobl,Cong,Safe	Twp	DOT,BCBC
	long term improvements			H	H	Mobl,Cong,Safe	Twp	Co,DOT

US 130 Corridor Transportation Problem Locations and Characteristics[1]

Location	Target Area	SDRP Center	Priority	Cost Range	Benefits	Lead Role	Assisting Role
16 Sunset Road and Amherst Drive (Burlington Township)							
short term improvements			M	L	Safe,Cong	Co	Twp
17 Salem Road and Willow Rd/Adams St (Burlington Township)							
short term improvements			L	L	Cong,Safe	Co	Twp
18 Rancocas Road and Elbow Lane (Burlington Township)	A6						
short term improvements			H	L	Safe,Mobl	Co	Twp
19 Warren Street Conrail Underpass (Edgewater Park Township)		X*					
short term improvements			M	L	Safe	Co	Twp
20 Warren St and Cooper St and Bridge St (Beverly City)	B2	X					
short term improvements			L	L	Safe	Co	Twp
21 US 130: Creek Road to Van Sciver Parkway (Edgewater Park and Willingboro Townships)	A7	X*					
short term improvements			H	L	Safe,Cong	Twp	DOT
long term improvements			M	H	Safe,Cong,ED	Twp	DOT
22 US 130 and Levitt Parkway/Woodlane Road (Edgewater Park and Willingboro Townships)	A7	X*					
long term improvements			M	M	Safe,Cong	DOT	Co,Twp
23 Levitt Pky at Sunset Rd, Charleston Rd and Salem Rd (Willingboro Township)							
short term improvements			L	L	Safe	Co	Twp
24 US 130 and Cooper Street / Charleston Road (Edgewater Park and Willingboro Townships)	A7	X*					
short term improvements			M	L	Cong,Safe	DOT	Twp
long term improvements			M	M	Cong,Safe	DOT	Twp,Co

US 130 Corridor Transportation Problem Locations and Characteristics[1]

Location		Target Area	SDRP Center	Priority	Cost Range	Benefits	Lead Role	Assisting Role
25	Cooper Street: US 130 to Green Street (Edgewater Park Township)	B1	X*					
	short term improvements			M	M	Safe,Mobl	Co	Twp
26	Delanco Road and Bridgeboro Road (Edgewater Park Township)		X*					
	short term improvements			L	L	Safe	Co	Twp
27	Delanco Road and Perkins Lane (Edgewater Park Township)		X*					
	short term improvements			L	L	Safe	Co	Twp
28	Creek Road and DMV Inspection Driveway (Delanco Township)		X*					
	short term improvements			H	L	Cong,Safe	DOT	
	long term improvements			M	H	Cong,Safe	DOT	Co
29	Creek Rd/Burlington Ave Connector (Delanco Township)	B3	X*					
	short term improvements			M	L	Mobl	Co	Twp
	long term improvements			M	H	Mobl,ED	Twp	Co
30	Burlington Ave and Willow St (Delanco Township)	B3	X*					
	short term improvements			M	L	Safe	Co	Twp
31	US 130 and Pennypacker Dr/Delanco Rd (Edgewater Park and Willingboro Townships)	A7	X*					
	long term improvements			M	H	Mobl,ED	Twp	DOT
32	US 130 and Creek Rd/Bridgeboro Rd (Edgewater Park and Willingboro Townships)	A7	X*					
	short term improvements			H	L	Cong,Safe	DOT	
	long term improvements			H	H**	Cong,Safe	DOT	Co,Twp

US 130 Corridor Transportation Problem Locations and Characteristics[1]

Location	*Target Area*	*SDRP Center*	*Priority*	*Cost Range*	*Benefits*	*Lead Role*	*Assisting Role*
33 Lafayette St and Pavilion Ave and Franklin St (Riverside Township)	A8	X*					
short term improvements			H	L	Safe	Co	Twp
long term improvements			L	M	Safe,Cong	Twp	Co,NJT
34 Lafayette St / Fairview St and New Jersey Ave / Fairview St (Riverside Township)	A8	X*					
short term improvements			M	L	Safe	Co	
35 St. Mihiel Dr / Chester Ave and New Jersey Ave / Chester Ave (Riverside Township)	A8	X*					
short term improvements			M	L	Safe	Co	
36 US 130: from Creek Rd to Tenby Chase Dr (Delran Township)	A10						
short term improvements			H	L	Safe,Cong	DOT	Twp
long term improvements			M	H	Safe,Cong	Twp	DOT,Co
37 US 130 and Fairview Street (Delran Township)	A10						
short term improvements			H	H	Mobl,Cong,ED	Twp	Co,DOT
38 US 130 and Chester Ave/Haines Mill Rd (Delran Township)	A10						
short term improvements			H	L	Cong,Mobl,Safe	DOT	
long term improvements			H	H	Cong,Mobl,Safe,ED	Twp	DOT,Co,Dev
39 US 130: from Andover Rd to Taylor's Lane (Cinnaminson Township)	A10						
short term improvements			H	H	Cong,Mobl,Safe,ED	Twp	Dev,DOT
long term improvements			M	M	Mobl,Safe	Twp	Dev,NJT,Co

US 130 Corridor Transportation Problem Locations and Characteristics[1]

Location		*Target Area*	*SDRP Center*	*Priority*	*Cost Range*	*Benefits*	*Lead Role*	*Assisting Role*
40	US 130 and Moorestown Riverton Rd (Cinnaminson Township)	A10						
	short term improvements			H	L	Cong,Mobl,Safe	DOT	Twp
	long term improvements			M	M	Cong,Mobl,Safe	DOT	Co,Twp
41	US 130 and Cinnaminson Ave Complex (Cinnaminson Township)	A10						
	long term improvements			H	H**	Cong,Safe,Mobl	DOT	Co,Twp
42	Fork Landing Rd over the Pennsauken Creek (Cinnaminson Township)							
	short term improvements			H	H**	Mobl,Safe	Twp	Co,DOT
43	Broad St: from Market St to Martha's Rd (Riverton and Palmyra Boroughs)	B4	X*					
	short term improvements			M	M	Mobl,Safe	Co	Boro,BCBC
	long term improvements			M	H	Mobl,Safe	Co	Boro,BCBC
44	NJ 73 and Broad Street (Palmyra Borough)	A11 B4	X*					
	short term improvements			H	L	Safe,Mobl	Boro	Co,DOT
	long term improvements			M	H	Safe,Mobl	DOT	Co,Boro,NJT, BCBC
T1	Traffic Signal Contract 16: NJ 30, NJ 38, NJ 70 and NJ 73, TIP # 0014A (Palmyra Boro and Cinnaminson Township)	A11	X*	H	H	Cong,Mobl	DOT	Co,Twp,Boro
T2	US 206: Old York Road and Rising Sun Road, I-295 to NJ 68, TIP # 1231 (Bordentown Township)	C1		H	H	Cong,Mobl	DOT	Co,Twp,NJTPK
T3 L2	Creek Road (CR 636): CR 613 to Moorestown Centerton Road, TIP # 1296 (Delran Township)			H	H	Mobl,Safe	Co	DOT,Twp

US 130 Corridor Transportation Problem Locations and Characteristics[1]

Location		*Target Area*	*SDRP Center*	*Priority*	*Cost Range*	*Benefits*	*Lead Role*	*Assisting Role*
T4	Burlington County Computerized Signal Control, Phase III, TIP # 1322 (Willingboro Township)			H	L	Cong,Mobl	Co	DOT,Twp
T5 L1	Southern New Jersey Light Rail Transit TIP # N035 (Trenton to Camden)	A1,A2 A4,A5,A8 A9,B2,B4	X	H	H	Mobl,ED,Cong,Safe	NJT	Co,City,Twp,Boro DOT
L3	Burlington City Transportation Center (Burlington City)	A5	X	H	M	Mobl,ED,Cong	NJT	Co,City

Key:

Location: T1 = listed in DVRPC's TIP, L1 = Listed in DVRPC's Long Range Plan

Target Area: A = Corridor-Wide significance, B = Local Significance, C = Outside County Defined Areas (*see page 11*)

SDRP Center: X = 1992 State Development and Redevelopment Plan designated center, X* = considering application for center designation

Priority: H = High, M = Moderate, L = Low

Cost Range: H = High, M = Moderate, L = Low

Benefits: Cong = Congestion, ED = Economic Development, Mobl = Mobility, Safe = Safety,

Role: Boro = Borough, City = City, Twp = Township, Co = County, DOT = NJ Department of Transportation, NJT = NJ Transit, NJTPK = NJ Turnpike Authority, BCBC = Burlington County Bridge Commission, Dev = Developers

** A long term potential improvement scenario is identified which recommends conducting a study or further evaluation; the designation for the cost represents an expected cost for completion of the long term improvement at the location not just the study cost.

OUTSTANDING ISSUES

Financing

The magnitude of this improvement plan requires that some creative financing methods be developed to begin to address the needs of this corridor. Each of the stakeholders in this process stand to benefit from improvements identified in this plan, therefore, it is incumbent upon them to contribute financially to their implementation. Traditional capital programming of improvements will not be sufficient to generate the level of investment needed to implement the transportation improvements which will reach the identified goals of the corridor. The county should take the lead to investigate the potential for creating other funding mechanisms such as public-private partnerships, a corridor improvement authority or special assessments.

Transportation Task Force

The steering committee, set up to guide this planning effort, played an active role throughout the whole process and were especially vital in preparing the transportation element of this corridor study. The committee members have a vested interest in improving the transportation and circulation, economic activity and quality of life not only in their own municipality but in The Corridor as a whole. A specific transportation task force of the committee should be retained and continue to meet on an on-going basis. This group should be composed of representatives of the following stakeholders, Burlington County, New Jersey DOT, corridor municipalities, New Jersey Transit, toll authorities within the corridor and a representative from the developer community. There is definitely a need to keep this group together so that the momentum initiated by the county's corridor planning efforts is carried forward. The types of activities in which the task force should be involved include: 1) working together to develop alternative funding mechanisms, 2) refining and detailing the potential improvement scenarios identified in this plan, 3) identifying new transportation problem locations, 4) providing input on proposed developments which will impact the corridor and 5) coordinating this plan with other on-going planning efforts in the corridor such as the county's economic development work, NJ Transit's light rail transit plan and NJ DOT's efforts to improve US 130.

Integration with the Light Rail Transit Plan

During the identification of transportation problem locations and the development of potential improvement scenarios, it was understood that a light rail transit system may be operating in this corridor in the near future. The impact of potential stations on the corridor's road network was taken into account. However, as the evaluation of the potential for initiating LRT service progresses it

should be integrated with this plan to assure that no adverse impacts are created and any potential problems can be addressed in updates of this plan. The corridor's transportation task force should be actively involved in the planning for this improvement.

Integration with the US 130 Reconstruction Plan

Although many problem intersections along US 130 have been addressed in this corridor study, there are other aspects of the highway which have not been addressed. Maintenance issues such as the condition of the road surface, condition of the median barrier, drainage, lighting and signage will be addressed by NJ DOT in their evaluation of this facility. The operational issues identified in this corridor study, plus any others that NJ DOT has identified should be integrated with any efforts NJ DOT takes to improve this highway. The corridor's transportation task force should be actively involved in the planning for all improvements to this facility.

APPENDIX A

List of Municipal Meeting Participants

Bordentown Township
Mayor Joseph Camarda
Rick Smith
John Mason

Burlington Township
Kevin McLernon
Avo Kart

City of Burlington
Mayor Herman Costello
Jeff Taylor
Curley Lawrence

Cinnaminson Township
Mayor Karen Eleuteri
Committeeman William Kollar
Nancy Myers
William Carlino

Delanco Township
Mayor Pepper Pendzinski
Committeewoman Joan Hinkle
John Fenimore

Delran Township
Committeeman Gerald Savidge
Jeff Hatcher
Thomas Whitesell
Richard Cureton
Joseph Augustyn
David Dion
Chuck Verdi
Chaz Verdi
John Eichmann

Edgewater Park
Mayor James Williams
Ed Iwanicki
Paul Guidrie

Florence Township
Mayor George Sampson
Committeeman Craig Wilkie
Richard Brook

Mansfield Township
Fred Clark

Palmyra Borough
Mayor Robert Leather
Councilman Joseph Ehrenreich
William Suchodolski

Riverside Township
Mayor Charles Hilton
Gary Lavenia

Riverton Borough
Mayor Bruce Gunn
Councilwoman Clara Ruvolo
Councilman Joseph Donnelly
Richard Gaughan
Robert Thomson
Roger Prichard

Willingboro Township
Councilwoman Doreatha Campbell
Norton Bonaparte
Harry McFarland
Arnold Barnett

Burlington County
Mark Remsa
Carol Ann Thomas

NJDOT
Dave Cox
James Badgley